ORDER NO. MD9405046C1
A6

Service Manual

Portable Stereo Component CD System

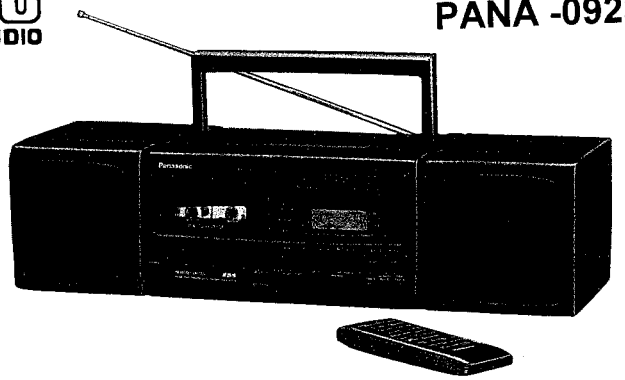
Radio Cassette

RX-E250

COMPACT disc DIGITAL AUDIO

MASH* multi-stage noise shaping

PANA -09230



Colour

(K) . . . Black Type

Area

Suffix for Model No.	Area	Colour
(P)	U.S.A	(K)
(PC)	Canada	

Tape section: AR300 Mechanism series
CD section: RAE0113Z Traverse deck series

■ SPECIFICATIONS

■ GENERAL

Power Requirement	AC; 120 V, 60 Hz Battery; 12 V (Eight "D" size, R20/LR20 batteries) Memory Back-up battery for Computer/clock 6 V (Four "AA" size, R6/LR6 batteries)
Power Consumption	37 W (AC only)
Power Output	Woofer; 22W (11 W × 2)...RMS (max)
Speaker	10 cm (4") × 2
Outputs	HEADPHONES; 32Ω, Ø3.5 SPEAKER; 2.7~8Ω
Dimensions	597 (W) × 153 (H) × 249 (D) mm (23½" × 6" × 9 13/16") Main unit; 297 × 153 × 249 mm (11 11/16" × 6" × 9 13/16") Speaker box; 150 × 152 × 233 mm (5 7/8" × 6" × 3 3/16")
Weight	5.4 kg (14 lbs. 14 oz) without batteries

■ CD PLAYER

Sampling Frequency	44.1 kHz
Decoding	16-bit linear
Beam Source	Semiconductor laser (wavelength 780 nm)
No. of Channels	2 channels, stereo
Frequency Range	20 Hz – 20 kHz (+0, –2 dB)
Wow and Flutter	Less than possible measurement data
D/A converter	MASH (1 bit DAC)

■ RADIO

Frequency Range	FM; 87.9 – 107.9 MHz (200 kHz steps) 87.5 – 108 MHz (100 kHz steps) AM: 520 – 1710 kHz
Intermediate Frequency	FM; 10.7 MHz AM; 450 kHz
Sensitivity	FM; 8 dB/50 mW output (–3 dB Limit Sens.) AM; 50 dB/m/50 mW output

■ TAPE DECK

Frequency Range	30 – 16000 Hz (with normal tape)
Recording System	AC bias AC erase
Tape Speed	4.8 cm/s (1 7/8 ips)
Monitor System	Variable sound monitor
Track System	4-track 2-channel stereo recording and playback

*MASH is a trademark of NTT.

Notes:
1. Weights and dimensions shown are approximate.
2. Design and specifications are subject to change without notice.

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Panasonic®

9230

⚠ WARNING

This service literature is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service literature by anyone else could result in serious injury or death.

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■ SAFETY PRECAUTION (This "Safety Precaution" is applied only in the U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

• INSULATION RESISTANCE TEST

1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmeter between the jumper AC plug and each exposed metal cabinet part, such as screwheads, antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts*. (Fig. 1) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. 2)
   *Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.
4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

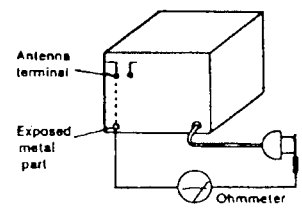


Fig. 1

Resistance = 3MΩ—5.2MΩ

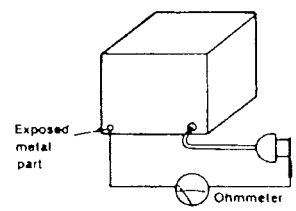


Fig. 2

Resistance = Approx ∞

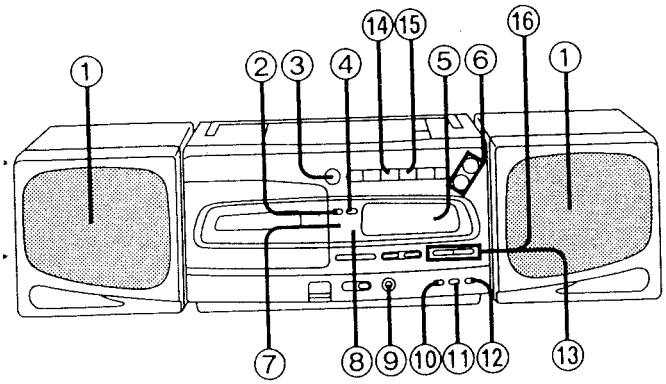
CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCES OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

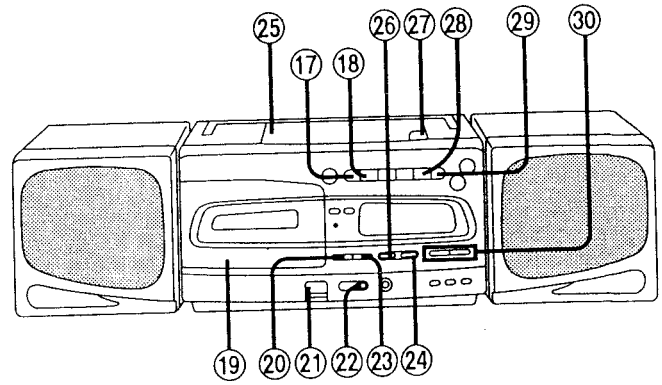
■ PRECAUTION OF LASER DIODE

CAUTION: This unit utilizes a class 1 laser. Invisible laser radiation is emitted from the optical pick up lens when the unit is turned on:

1. Do not look directly into the pick up lens.
2. Do not use optical instruments to look at the pick up lens
3. Do not adjust the preset variable resistor on the optical pick up.
4. Do not disassemble the optical pick up unit.
5. If the optical pick up is replaced, use the manufacturer's specified replacement pick up only.
6. Use of control or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

■ LOCATION OF CONTROLS





Basic controls

No.	*Name*
①	Speakers
②	Sleep timer button (SLEEP)
③	Power switch (POWER)
④	Preset equalizer button (PRESET EQ)
⑤	Display panel
⑥	Volume control button (VOLUME)
⑦	Power/Battery check indicator (POWER/BATT)
⑧	Remote control signal sensor (SENSOR)
⑨	Headphones jack (PHONES)
⑩	Timer set button (TIMER)
⑪	Time adjust/Memory button (ADJUST, MEMORY)
⑫	Time check button (TIME CHECK)
⑬	Time set button (⏮⏪, ⏩/⏭, — TUNING/TIME SET +)

Tuner controls

No.	*Name*
⑭	Band select button (BAND)
⑮	Preset tuning button (PRESET TUNING)
⑯	Tuning button (⏮/⏪, ⏩/⏭, — TUNING/TIME SET +)

Deck controls

No.	*Name*
⑰	Stop button (□ STOP)
⑱	Play/direction button (◁ ▷ PLAY/DIR)
⑲	Tape lid
⑳	Rewind button (REW)
㉑	Tape lid open button (⏏ EJECT)
㉒	Counter reset button (COUNTER RESET)
㉓	Fast forward button (FF)
㉔	Recording standby button (REC PAUSE)

CD controls

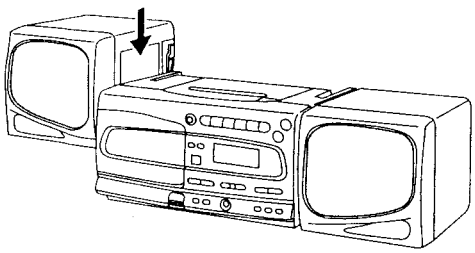
No.	*Name*
㉕	CD lid
㉖	Easy CD recording button (EASY CD REC)
㉗	CD lid open button (⏏)
㉘	Play/Pause button (⏯ PLAY/PAUSE)
㉙	Stop/Clear button (□ STOP/CLEAR)
㉚	Skip/search buttons (⏮/⏪, ⏩/⏭, — TUNING/TIME SET+)

■ CONNECTING THE SPEAKER SYSTEM

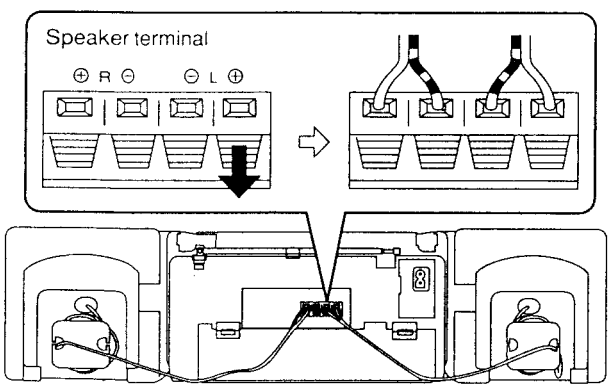
This unit can be used as a one-piece portable stereo system or a three-piece component system, by attaching or detaching the speaker system.
Before attaching or detaching the speakers, be sure to disconnect the speaker cables from the speaker terminals.
Be sure to press POWER to turn the unit off before connecting or disconnecting the speaker cables.

Attaching the speakers

1. **Align the speaker with the main unit as shown in the figure, interlock the grooves and press down.**



2. **Connect the speaker cord to the speaker terminal.**

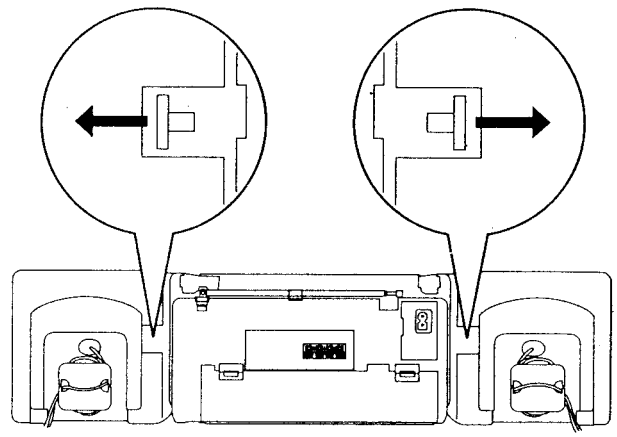


3. **When using the unit with the speakers attached, wind the speaker cables as shown.**

Note

Since a strong magnet is used for the speaker, keep magnetized commuter passes, tickets or personal credit cards, recorded tapes, watches, etc. away from the speakers. The magnet in the speakers may damage them.

Detaching the speakers



1. **Unlock the speaker release levers by pulling them in the direction shown above, and slide up each speaker.**
2. **Connect the speaker cables to the speaker terminals.**

BATTERY SERVICE LIFE

UM-1 (D-size) Batteries
Approx. 5.5 hours of CD recording (EIAJ)
Approx. 4.5 hours of CD playback (EIAJ) with volume set at 3/4 position.
Approx. 12.75 hours of tape recording (EIAJ)
Approx. 7.25 hours of tape playback (EIAJ) with volume set at 3/4 position.

The above battery service life is measured according to the conditions set forth by EIAJ (Electronic Industries Association of Japan). As the battery service life varies with the method of operation and environmental conditions, use these values as reference.

■ HANDLING PRECAUTIONS FOR TRAVERSE DECK

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

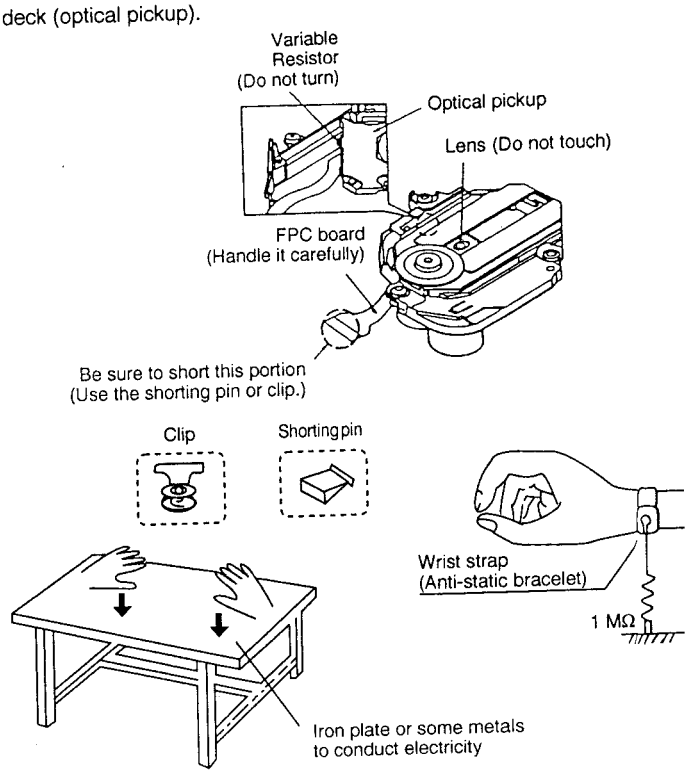
- **Handling of traverse deck (optical pickup)**

1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an anti-static shorting pin is inserted into the flexible board (FPC board). When removing or connecting the short pin, finish the job in as short time as possible.
3. Take care not to apply excessive stress to the flexible board (FPC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

- **Grounding for electrostatic breakdown prevention**

1. Human body grounding.
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding.
   Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

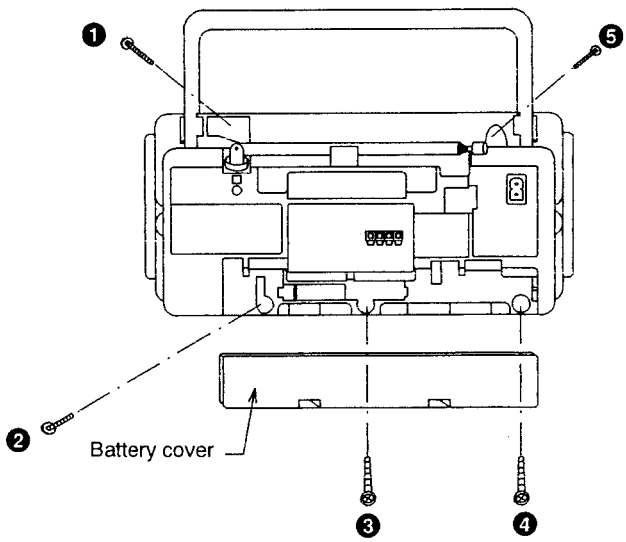
Caution:
The static electricity of your clothes will not be grounded through the he wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

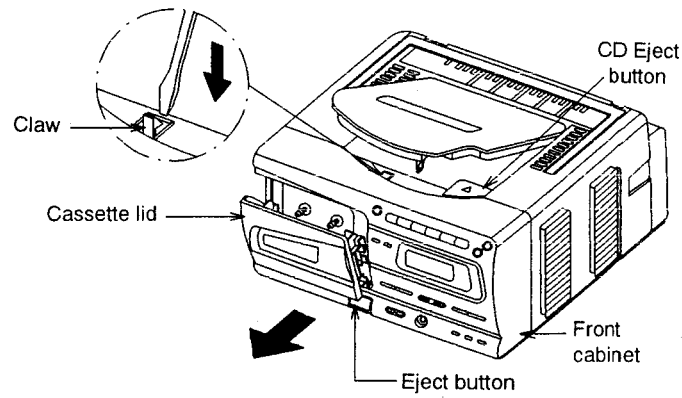


■ DISASSEMBLY INSTRUCTIONS

Warning: This product uses a laser diode. Refer to caution statements on page 2.
ACHTUNG: Die lasereinheit nicht zerlegen.
Die lasereilnheit dart nur gegen eine vom hersteller speziferte einheit ausgetauscht werden.
"ATTENTION SERVICER" Some chassis components may have sharp edges. Be careful when disassembling and servicing.

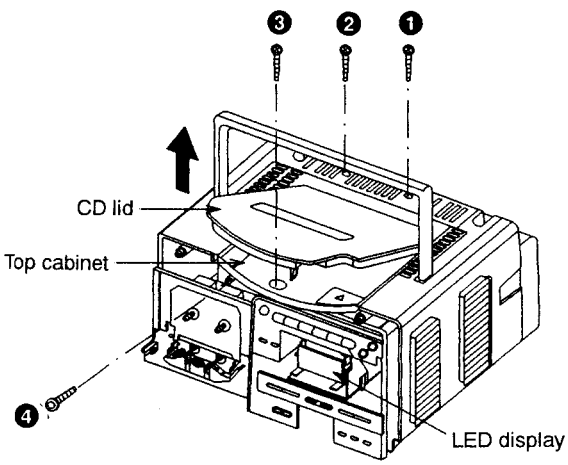
Ref. No. 1	Removal of the Front Cabinet
Procedure 1	1. Remove the battery cover. 2. Remove the 5 screws (❶ ~ ❺).





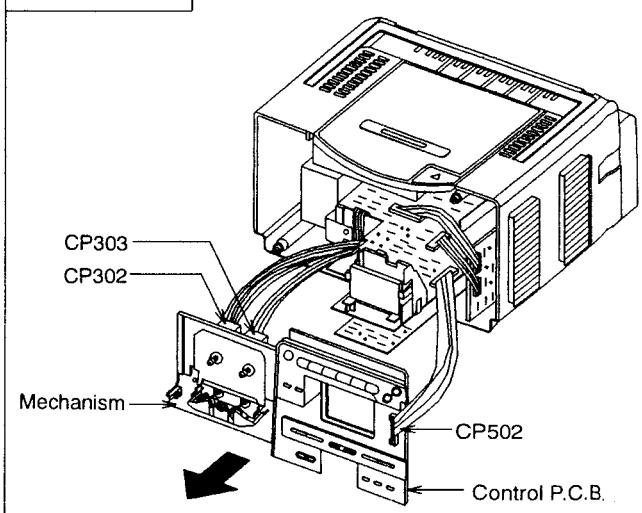
3. Press the EJECT button and open cassette lid.
4. Press the CD eject button to open CD lid.
5. Release the claw with a (–) screwdriver in the direction of arrow.
6. Remove the front cabinet in the direction of arrow.

Ref. No. 2	Removal of the Top Cabinet
Procedure 1 → 2	



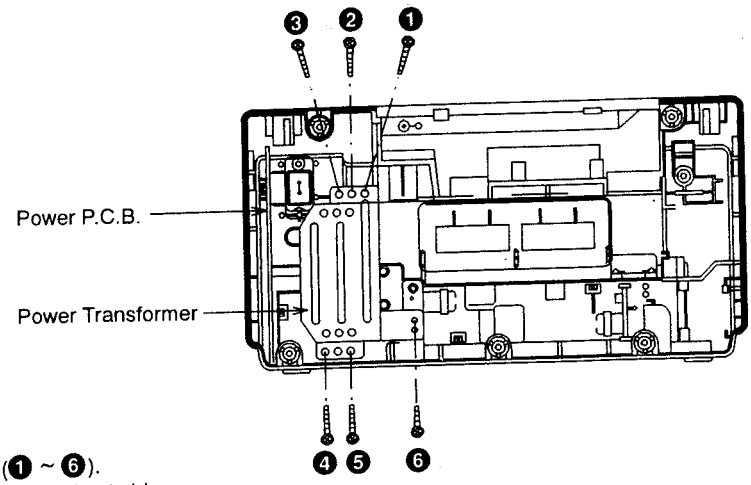
1. Remove 4 screws (❶ ~ ❹).
2. Remove top cover together with CD Lid.

Ref. No. 3	Removal of Mechanism Control Block
Procedure 1 → 3	



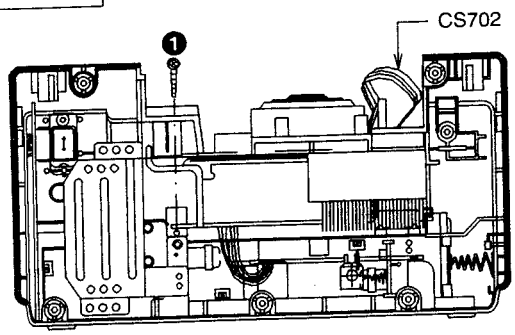
1. Remove CP302, CP303, CP502.
2. Remove whole mechanism and control P.C.B. block in the direction of arrow.

Ref. No. 4	Removal of the Power P.C.B.
Procedure 1 → 3 → 4	



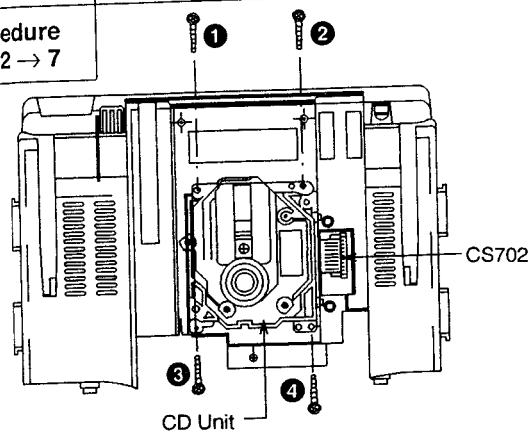
1. Remove 6 screws (❶ ~ ❻).
2. Slide out Power P.C.B. to front side.

Ref. No. 5	Removal of the Main P.C.B., Headphone P.C.B., Tuner P.C.B.
Procedure 1 → 2 → 3 → 5	



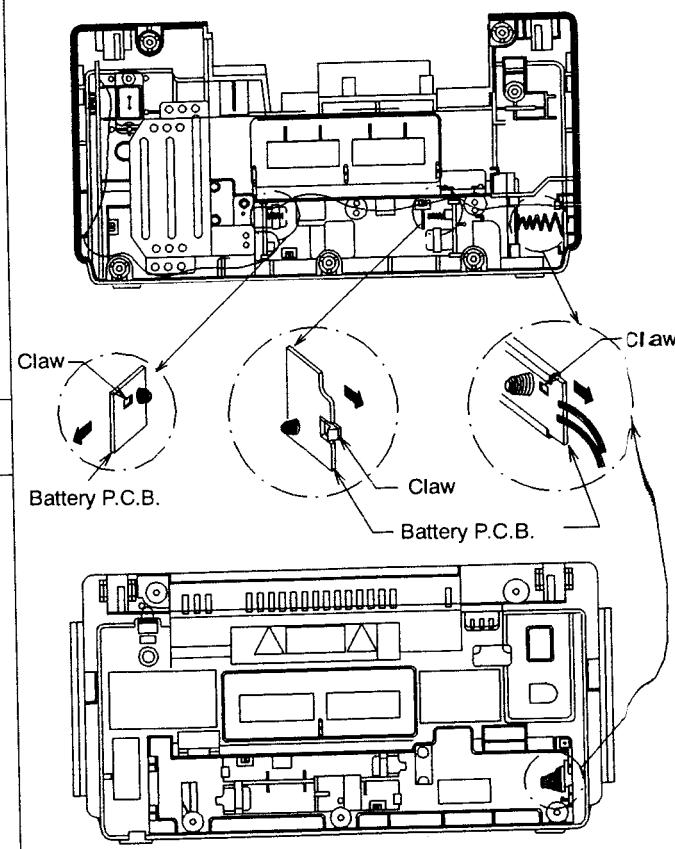
1. Remove 1 screw (❶) and pull out FFC cable from CS702.
2. Pull the Main P.C.B. out to front direction. (Tuner P.C.B., Headphone P.C.B. come off together with main P.C.B.)

Ref. No. 7	Removal of the CD unit
Procedure 1 → 2 → 7	



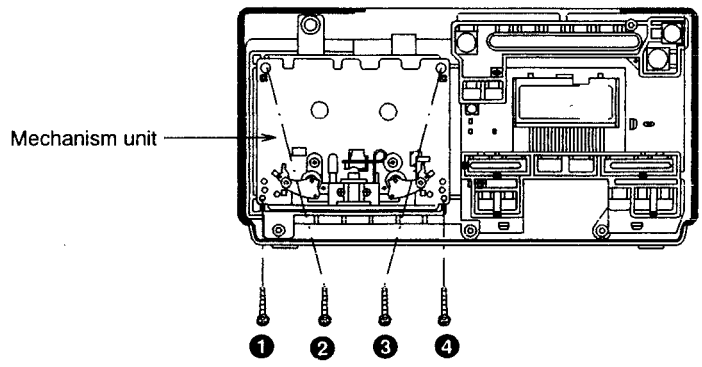
1. Remove the 4 screws (❶ ~ ❹).
2. Remove the CD traverse unit.
3. Remove FFC cable from CS702.

Ref. No. 6	Removal of the Battery P.C.B.
Procedure 1 → 2 → 3 → 5 → 6	



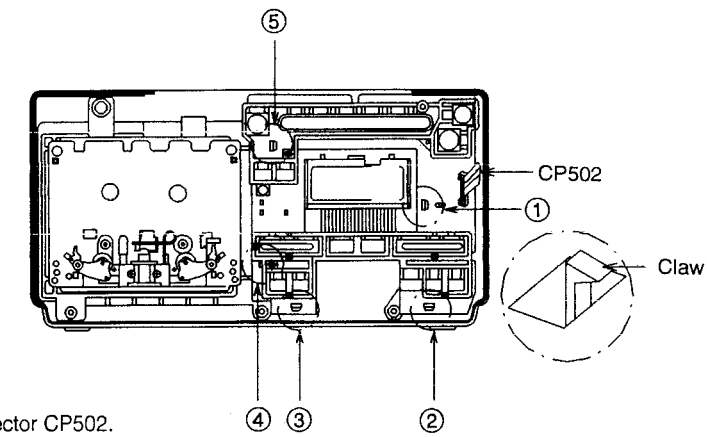
1. Release the claw.
2. Remove the Battery P.C.B. in the direction of arrow.

Ref. No. 8	Removal of the Mechanism Unit
Procedure 1 → 3 → 8	



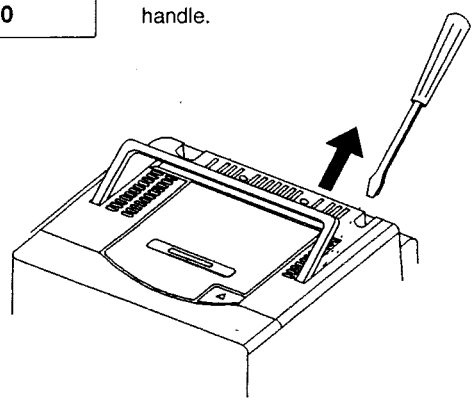
1. Remove 4 screws (❶ ~ ❹).
2. Remove the cassette mechanism.

Ref. No 9	Removal of the Panel P.C.B.
Procedure 1 → 9	



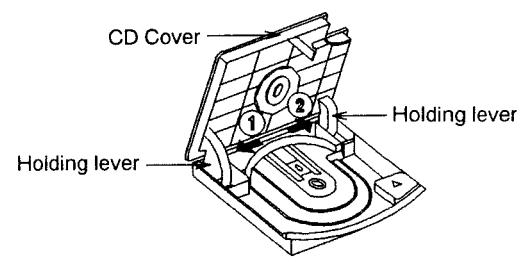
1. Remove W502 from connector CP502.
2. Release 5 claws.
3. Remove the Panel P.C.B.

Ref. No. 10	Removal of the Handle
Procedure 10	• There is a catch at both side to hold the handle.



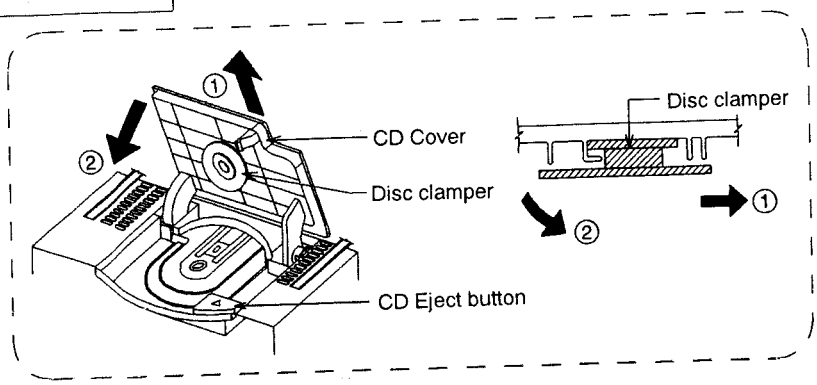
1. Lift up handle to half position.
2. Insert flat tip screw driver and push the catch.
3. Pull the handle to the direction of arrow.

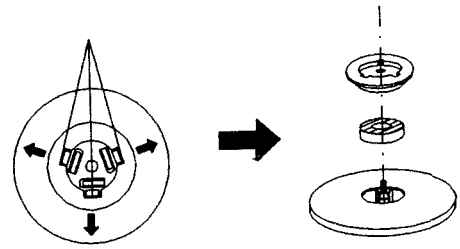
Ref. No. 11	Removal of the CD cover
Procedure 11	



1. Push the Holding Lever in the direction of arrows ① and ②.
2. Remove the CD cover.

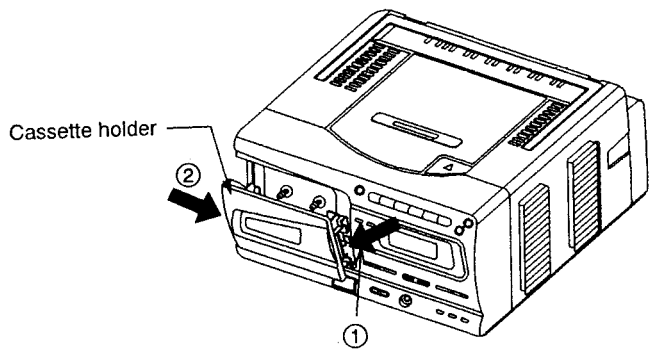
Ref. No. 12	Removal of the Disc Clamper
Procedure 12	





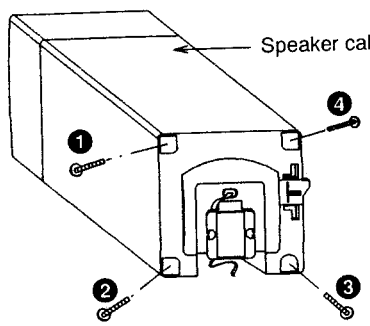
1. Press the CD eject button and then open the CD cover.
2. Slide the disc clamper in the direction of the arrow ① and then remove the disc clamper in the direction of the arrow ②.

Ref. No. 13	Removal of the Cassette Holder
Procedure 13	



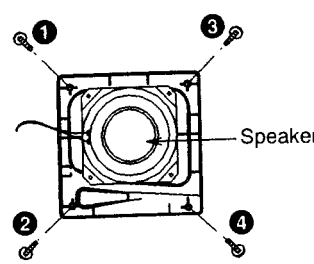
1. Push the cassette holder Rib in the direction of arrow ① and ②.
2. Remove the Cassette Holder.

Ref. No. 14	Removal of the Speaker Cabinet
Procedure 14	



1. Remove 4 screws (❶ ~ ❹).
2. Remove the speaker cabinet.

Ref. No. 15	Removal of the Speaker
Procedure 14 → 15	



1. Remove 4 screws (❶ ~ ❹).

■ MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
1. Set power source voltage to 12 V DC. 2. Set power switch to ON. 3. Set band switch to AM, FM or FM STEREO.	4. Set volume control to maximum. 5. Output of signal generator should be no higher than necessary to obtain an output reading.

- The parts other than the one listed below are aligned at the factory before they are supplied. Therefore, alignment of those parts is unnecessary when used for replacement.

■ AM-IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig.1)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate signal into loop ant. of receiver.	450 kHz 30% Mod. at 400Hz	Point of non-interference.(on/ about 600kHz)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	T2 (AM IFT)	Adjust for maximum output.

■ AM-RF ALIGNMENT

Fashion a loop of several turns of wire and radiate signal into loop ant. of receiver.	520kHz	Tuning capacitor fully closed.	"	—	Adjust to the range of 1.3 ± 0.3 V
"	1710kHz	Tuning capacitor fully open.	"	—	Adjust to the range of 6.2 ± 0.4 V
"	600kHz	Tune to signal	"	[*1] L2 (AM ANT Coil)	Adjust for maximum output. Adjust L2 by moving coil along the ferrite core.
"	1400kHz	"	"	CT1 (AM ANT Trimmer)	Adjust for maximum output.
[*1] Fix antenna coil with wax after completing alignment.					

■ FM DC BALANCE ALIGNMENT

FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECITONS ELECTRONIC COUNTER	ADJUSTMENT (Shown in Fig. 1)	SPECIFICATION	REMARKS
98 MHz, 60 dB (CW) connect to test point TP1 through FM dummy antenna. Negative side to TP2.	TP6 ... (+) TP7 ... (–)	T2	0 ± 50 mV	Adjust T2, for 0 ±50 mV reading on frequency counter.

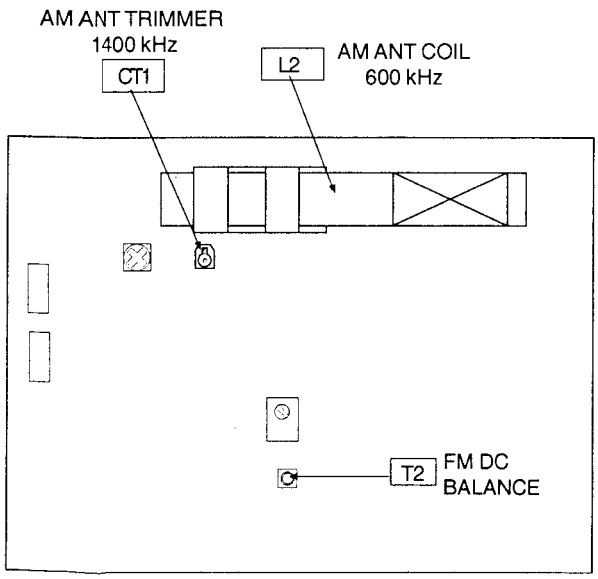


Fig. 1

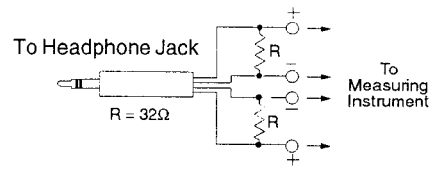


Fig. 2

ASSETTE DECK SECTION >

.IGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Set power source voltage to 12 V DC.
Set power switch to ON.
Set function swich to TAPE.
Set volume control to maximum.
Output of signal generator should be no higher than necessary to obtain an output reading.

:AD AZIMUTH ALIGNMENT

TEST TAPE	INDICATOR (ELECTRONIC VOLTMETER or OSCILLATOR)	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCFM kHz, – 20 dB)	Headphones Jack (32 Ω)	Azimuth Screw (Refer to Fig. 4)	Maximum output	1.Playback mode. 2.Adjust for maximum output.

ıution:
Please replace both azimuth adjustment screws (RHE5152ZB) and springs (RMB0331) simultaneously when readjusting the head azimuth. (shown in Fig. 2)
Even if you wish to readjust the head azimuth without replacing the screws and springs, a fine adjustment cannot be done because of the screw-locking bond adhered to the azimuth screw and spring. Please remove the screw-locking bond left on the head base when replacing the azimuth screw.
If you wish to readjust the head azimuth, be sure to adjust with adhering the cassette tape closely to the mechanism by pushing the center of cassette tape with your finger. (shown in Fig. 3)

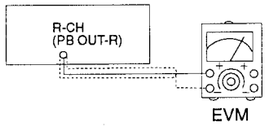


Fig. 1

(RHE5152ZB)
(RMB0331)
Fig.2

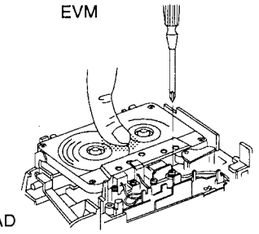


Fig. 3

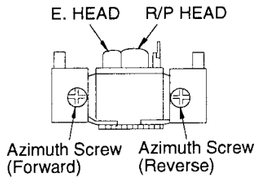


Fig. 4

.PE SPEED ALIGNMENT

TEST TAPE	INDICATOR (FREQUENCY COUNTER)	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCWAT kHz, – 10 dB)	Headphones Jack (32 Ω)	VR301 (Fig. 5)	3000 ± 30 Hz	1.Playback mode. 2.Adjust VR301, for 3000 ±30 Hz reading on frequency counter.

:C BIAS CHECK

TEST TAPE	INDICATOR (FREQUENCY COUNTER)	ADJUSTMENT	SPECIFICATION	REMARKS
;e Normal tape	TP2 ... (+) TP1 ... (–) (Refer to Fig. 6)	—	17.2 ± 2 mV	• Record mode

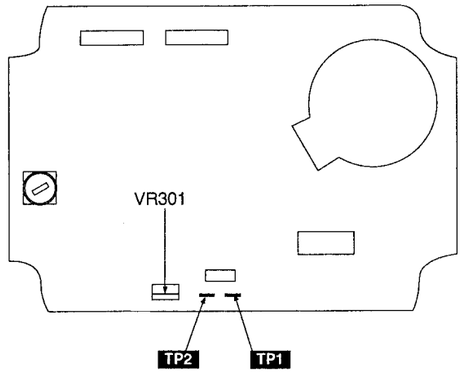


Fig. 5

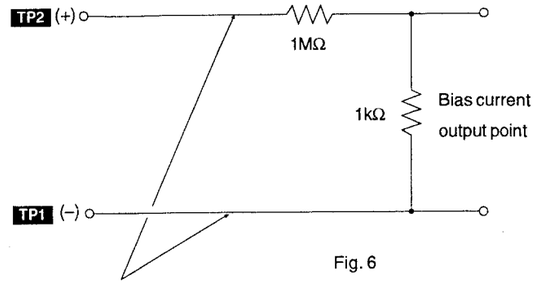


Fig. 6

Keep these cords short. (Line capacitance: 3 pF or less)
- In order not to influence the bias oscillation, divide the voltage with 1 MΩ and 1 kΩ resistors, and measure the voltage across the 1 kΩ resistor.

< CD PLAYER SECTION >

Warning: This product uses a laser diode. Refer to caution statements on page 2.

Caution: It is very dangerous to look or touch the laser beam. (laser radiation is invisible)
With the unit turned "on", laser radiation is emitted from the pickup lens.
Avoid exposure to the laser beam, especially when performing adjustments.

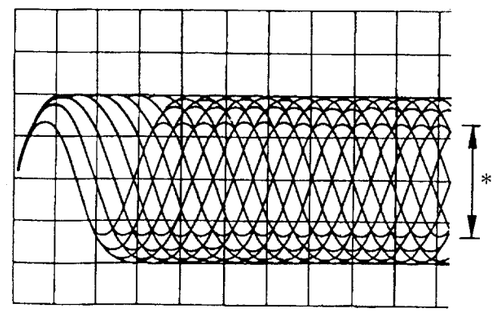
Measuring Instruments and Special Tools

* Test discs
1. Playability test disc (SZZP1054C).
2. Uneven test disc (SZZP1056C).
* Musical program disc (ordinary).
* Dual-beam oscilloscope with bandwidth of 30 MHz or better (with EXT. trigger and 1 : 1 probe).
* Allen wrench (M2.0) (SZZP1101C).
* Lock paint (RZZ0L01)

(1) MECHANICAL ADJUSTMENT

- When the traverse deck is replaced, making adjustments is not necessary. (The traverse deck ass'y is already adjusted.)
- Make adjustments to improve playability if the traverse deck has not been replaced.

1. Connect the oscilloscope's CH. 1 probe across **TJ701** (RF) (+) and **TJ702** (V-Ref.) (–) on the servo P.C.B.
   Oscilloscope setting : VOLT .....200mV.
   SWEEP.....0.5µs.
   Input coupling .....AC.
2. Switch the player power **ON**, and play track **19** on the test disc (SZZ1056C).
   (Playing any other track will prevent the HEX screws from being accessed.)
3. Leave the player in play mode.
4. Alternately adjust the HEX screws with the 2.0mm allen wrench (SZZP1101C) until the vertical fluctuation of RF signal is minimized and the eye pattern is most stretched. (Refer to Fig. 2 on page 13)
5. After completing the adjustment, lock the HEX screws with lock paint (RZZ0L01).



* Most stretched eye pattern

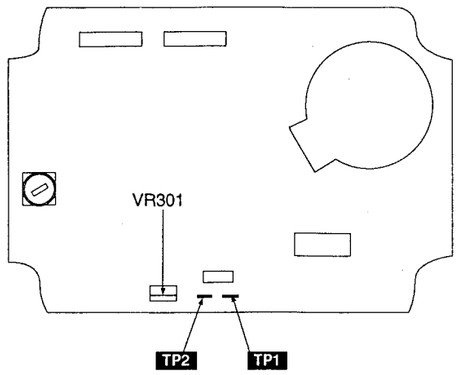
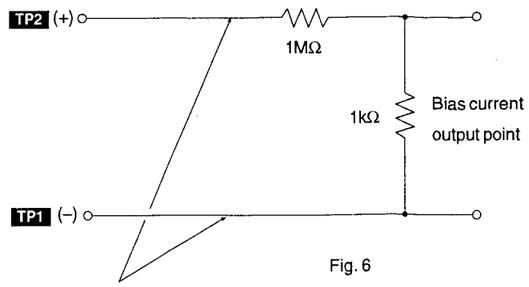


Fig. 5



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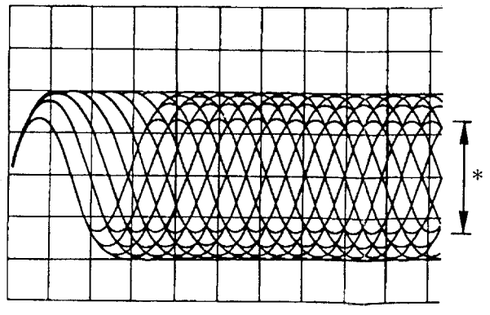


* Most stretched eye pattern

(3) CHECK OF PLAY OPERATION AFTER ADJUSTMENT

* **Checking skip Search**
1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

* **Checking Manual Search**
1. Play an ordinary musical program disc.
2. Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and reverse directions).

* **Checking Playability**
1. Play the 0.7mm black dot and the 0.7mm wedge o the test disc (SZZP1054C) and verify that no sour skip or noise occurs.
2. Play the middle tracks of the uneven test dis (SZZP1056C) and verify that no sound skip or nois occurs.

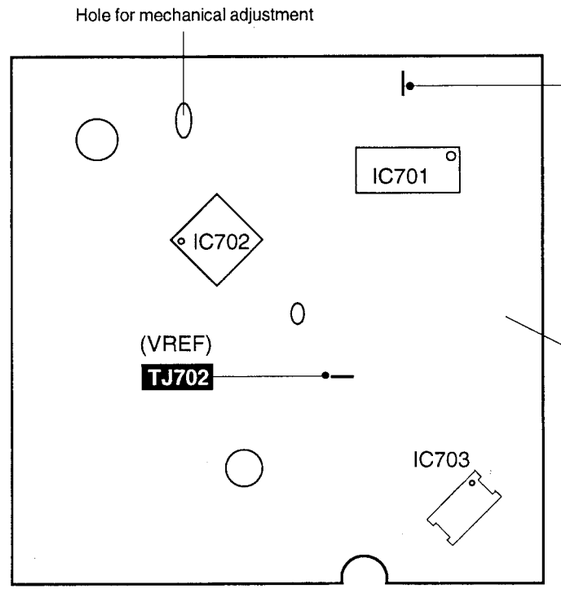


Fig.1

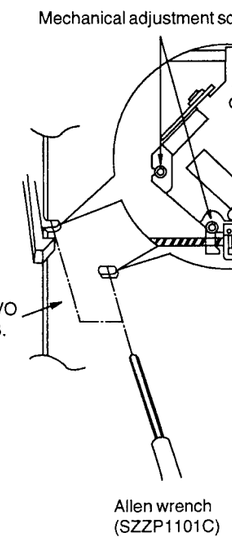


Fig.2

■ SCHEMATIC DIAGRAM

NOTES:

- S502 : CD Leaf switch.
- S701 : CD Reset switch.
- S802 : Tape Counter Reset switch.
- S803 : Tape Record Pause switch.
- S804 : CD-To-Tape Record switch.
- S805 : Tape FF switch.
- S806 : Tape REW switch.
- S807 : Tape Play/DIR switch.
- S808 : Tape Stop switch.
- S809 : Timer Set switch.
- S810 : Memory Adjustment switch.
- S811 : Timer Check switch.
- S812 : Tuning/Timer Set/CD skip (–) switch.
- S813 : Tuning/Timer Set/CD skip (+) switch.
- S814 : Volume (–) switch.
- S815 : Volume (+) switch.
- S816 : Preset Equalizer switch.
- S817 : CD Stop/Clear switch.
- S818 : CD Play/Pause switch.
- S819 : Tuner Band switch.
- S820 : Preset Tuning switch.
- S821 : Sleep switch.
- S822 : Power ON/OFF switch.
- S901 : AC Jack.
- S971 : Mode Detect switch.
- S972 : Tape Detect switch.
- S973 : TAB Detect switch.
- S974 : TAB Detect switch.
- VR301 : Tape Speed Adjustment.

- Battery Current :

Vol. max	520 mA	(FM)
	750 mA	(TAPE)
	1600 mA	(Recording; CD to tape)
	650 mA	(Recording; Tuner to tape)
	1500 mA	(CD)

Measurement instructions

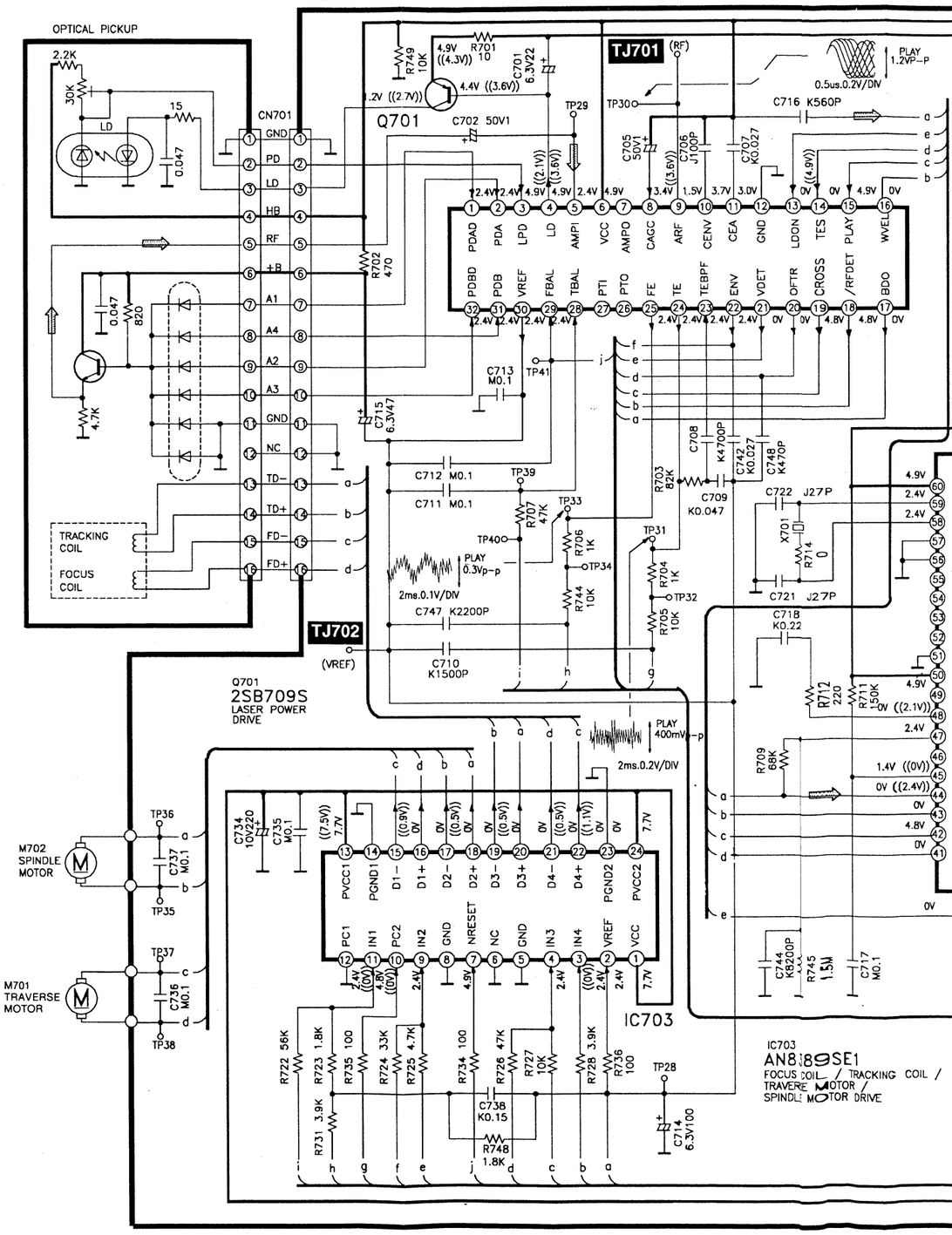
FM	:	74 dB/m, 30% Mod.
TAPE	:	315 dB, 0 dB
CD	:	1 kHz, 0 dB

- DC voltage measurements are taken with electronic voltmeter from negative terminal of battery.
- *L1 and *L4 are printed coils formed on the P.C.B and thus not found in the Replacement Parts List.
- No mark ... Playback < > ... FM ( ) ... AM
  << >> ... REC { } ... TUNER (( )) ... CD
- Important Safety Notice:
  Component identified by ⚠ have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

- **This schematic diagram may be modified at anytime with the development of new technology.**

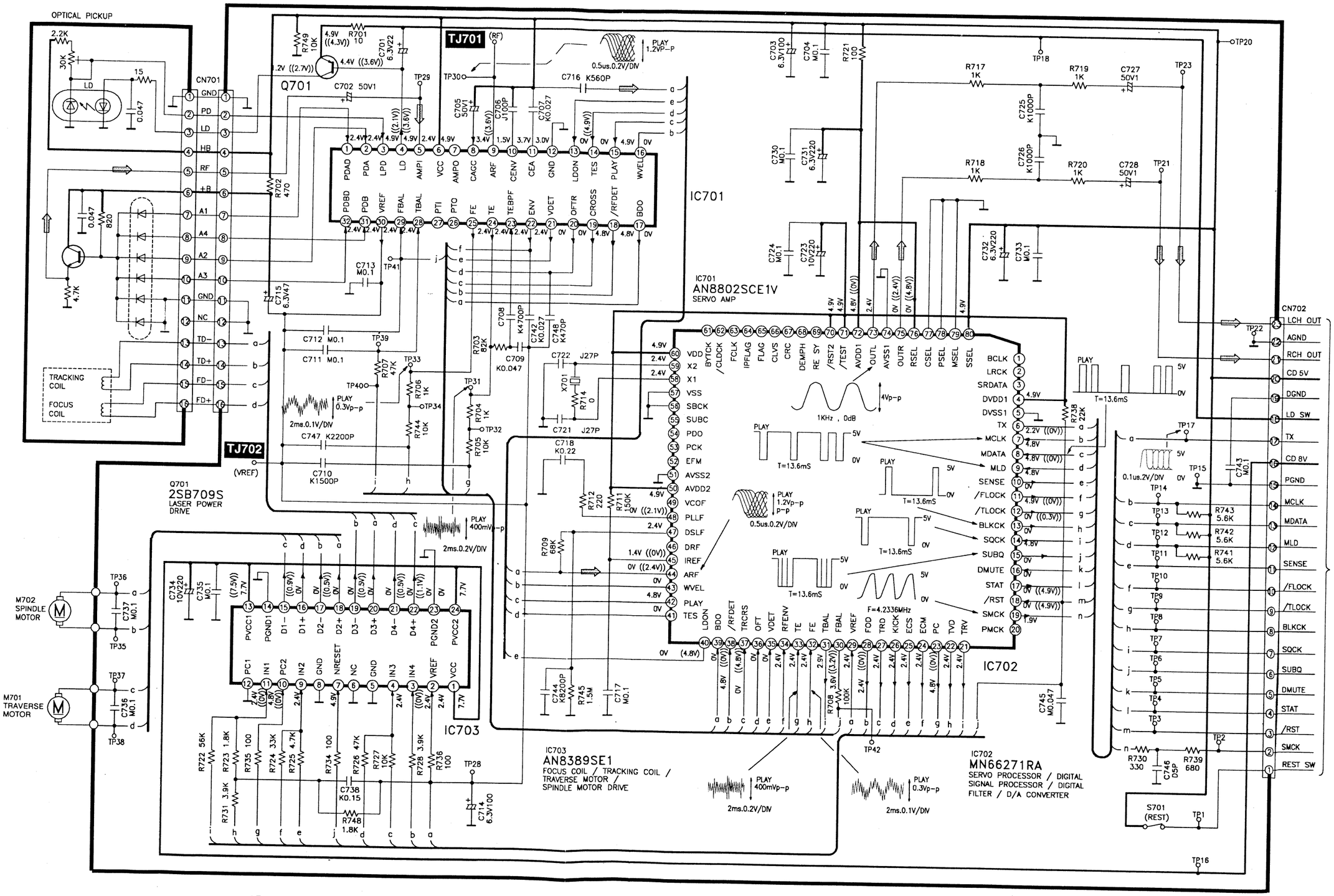
... FM SIGNAL LINE
... AM SIGNAL LINE
... FM OSC SIGNAL LINE
... +B LINE
... FM/AM SIGNAL LINE
... AM OSC SIGNAL LINE
... CD SIGNAL LINE
... PLAYBACK SIGNAL LINE
... RECORD SIGNAL LINE
... MAIN SIGNAL LINE

A SERVO CIRCUIT

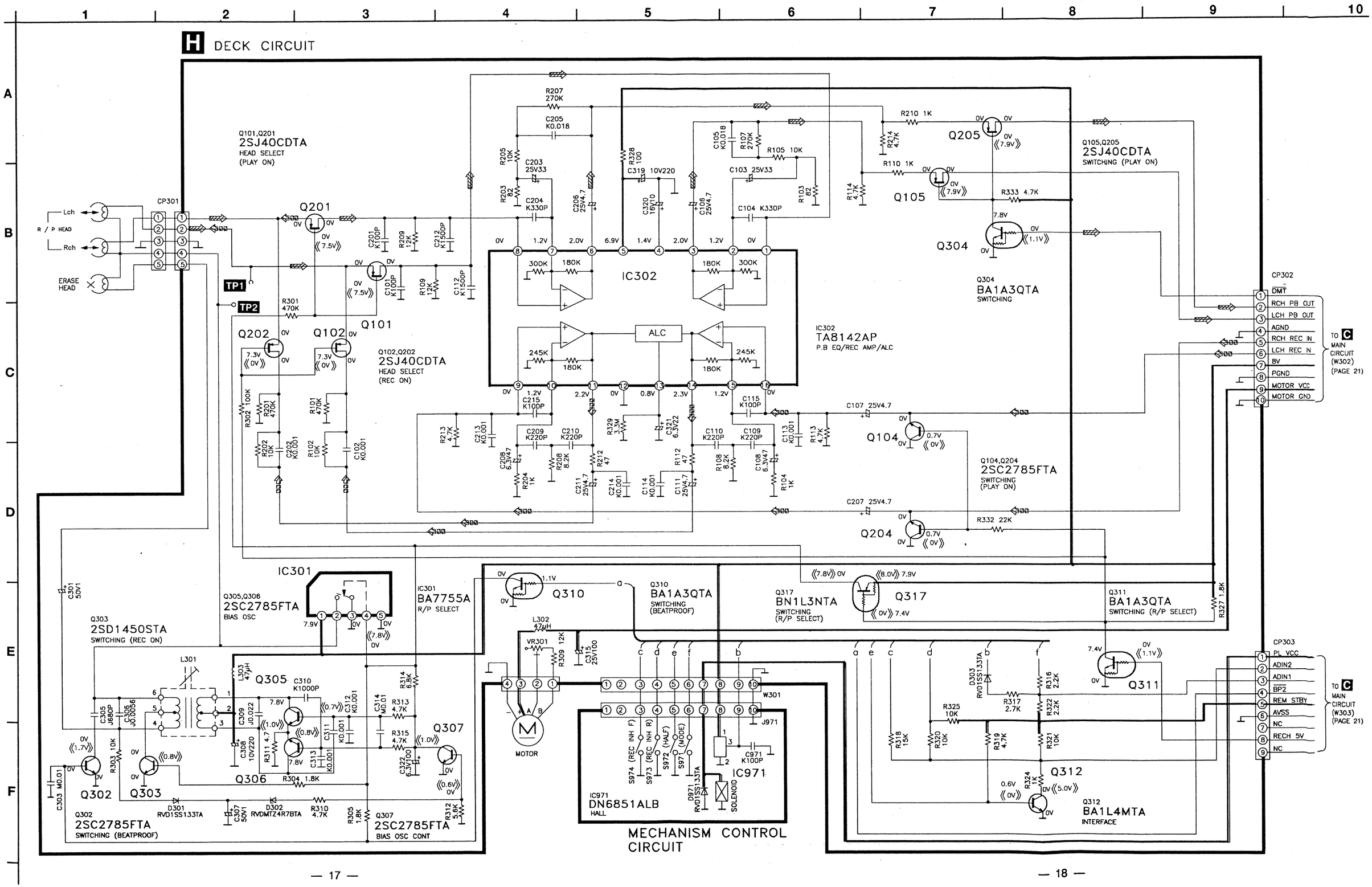

OPTICAL PICKUP
CN701
TJ701
TJ702
Q701
2SB709S
LASER POWER DRIVE
IC703
AN8389SE1
FOCUS COIL / TRACKING COIL / TRAVERSE MOTOR / SPINDLE MOTOR DRIVE
M702 SPINDLE MOTOR
M701 TRAVERSE MOTOR
TRACKING COIL
FOCUS COIL
PDAD PDA LPD LD AMPI VCC AMPO CAGC ARF CENV CEA GND LDON TES PLAY WVEL
PDBD PDB VREF FBAL TBAL PTI PTO FE TE TEBPF ENV VDET OFTR CROSS /RFDET BDO
GND PD LD HB RF +B A1 A4 A2 A3 GND NC TD– TD+ FD– FD+
PVCC1 PGND1 D1– D1+ D2– D2+ D3– D3+ D4– D4+ PGND2 PVCC2
PC1 IN1 PC2 IN2 GND NRESET NC GND IN3 IN4 VREF VCC
PLAY 1.2Vp-p
PLAY 0.3Vp-p
PLAY 400mVp-p

5 6 7 8 9 10 11 12 13 14

A SERVO CIRCUIT



■ SCHEMATIC DIAGRAM



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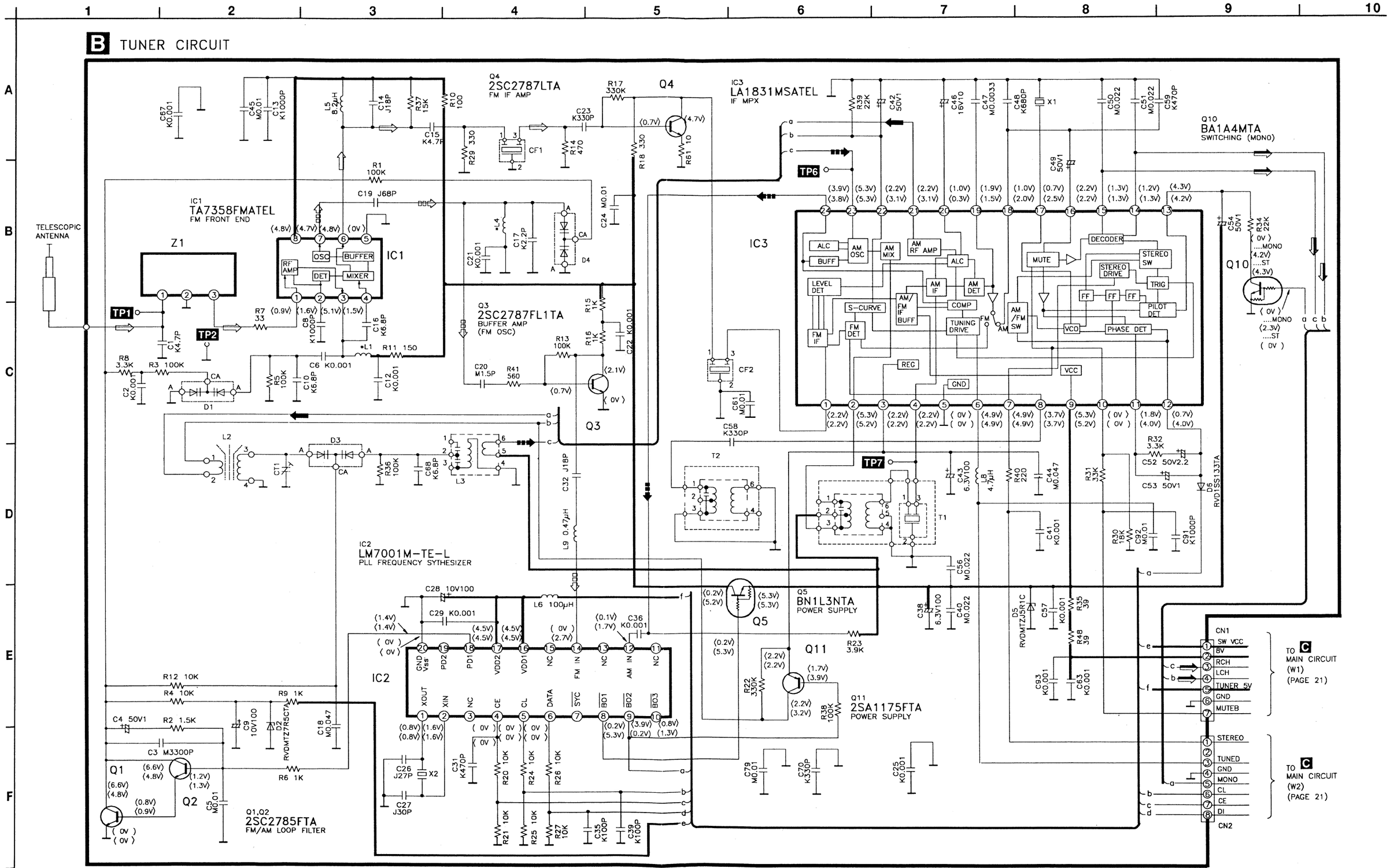
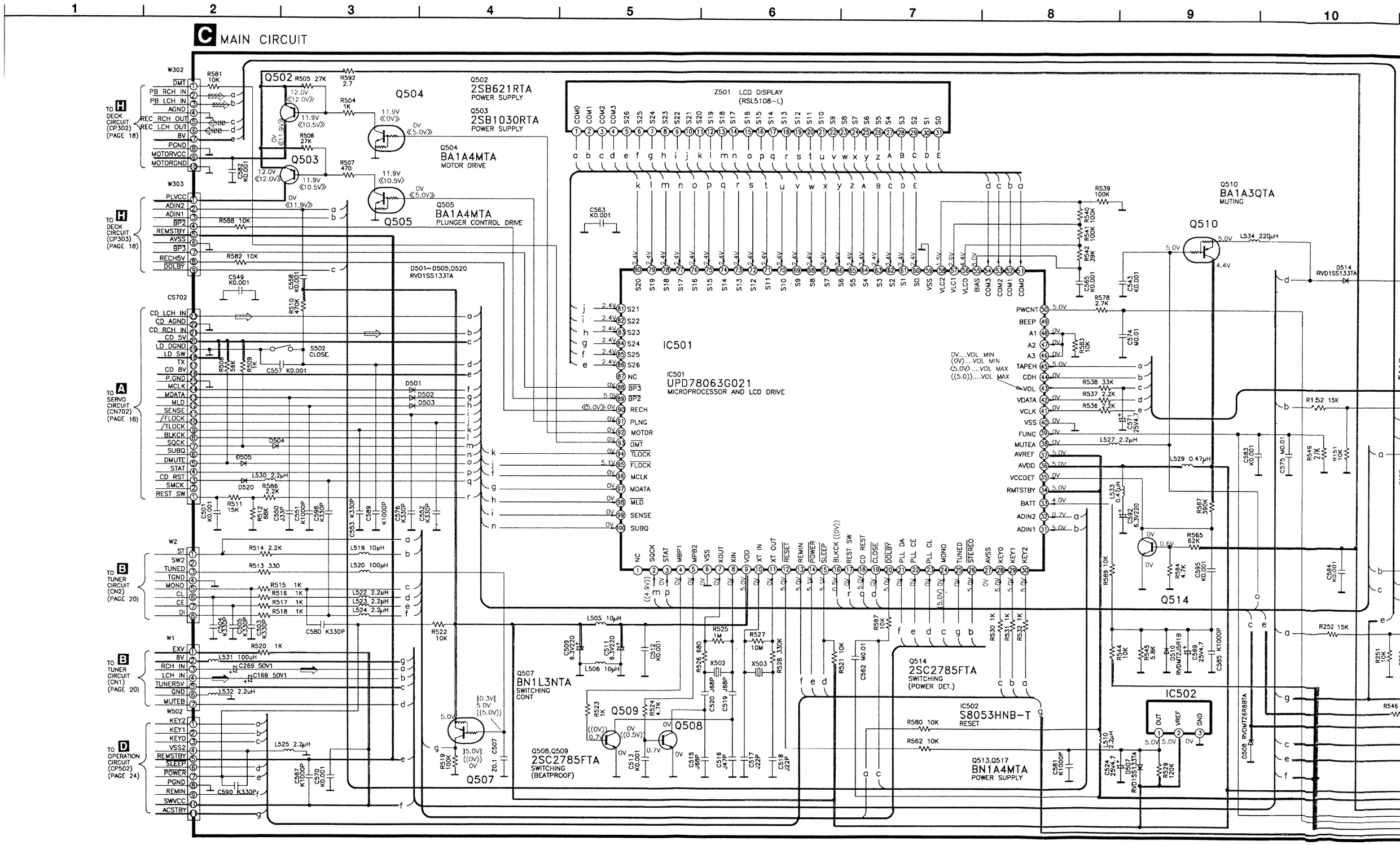


SCHEMATIC DIAGRAM



10 11 12 13 14 15 16 17 18 19

IC506
AN7135
POWER AMP

IC506
LCH RCH
1 1.3V 2 0V 3 10.7V 4 0V 5 0V 6 -1.3V 7 6.3V 8 10.0V 9 0V 10 12.0V 11 10.0V 12 6.3V

R555 56
C166 K470P
C265 K470P
C152 18V100
C252 16V100
C255 J0.22
C254 10V2200
C538 25V3300
C154 10V2200
C155 J0.22
R556 1.2K
R161 4.7
R260 27K
R269 68K
R253 10K
C256 25V0.33
C156 25V0.33
C153 10V100
C253 10V100
R169 68K
C548 25V220
R577 12K
D521

JK501
(L CH) PM DYNAMIC SPEAKER 10cm(4"),2.7Ω (WOOFER)
(R CH) PM DYNAMIC SPEAKER 10cm(4"),2.7Ω (WOOFER)

W503
SPKGND
LO RIN
LO LIN
SWLO ROUT
SWHI LOUT
SWLO LOUT

R235 150
R135 150
JK702 HEADPHONE

IC701
TA8184FMATEL
SOUND PROCESSOR

D514
RVD1SS133TA
R573 4.7K
C540 10V22
R574 33K
Q152
R160 27K
R164 4.7K
Q252
R264 4.7K
Q152,Q252
2SD1020HTA
MUTING CONT

Q511
BN1L3NTA
POWER SUPPLY

Q512
BN1L4MTA
POWER SUPPLY CONT

IC503
S81350HG-T
REGULATOR

W504
DATA
CLK
VOL
+8V
EQ RIN
EQ LIN
AGND
EQ ROUT
EQ LOUT

R152 15K
R157 33K
R155 1.5K
R154 68K
R549 27K
R151 10K
R158 3.9K
C151 K0.001
R156 10K
R153 10K
C573 K0.001
C536 K1000P

IC505
UPD4052BG-E2
SELECTOR
IC505
5.0V 0V 0V 0V 5.0V 0V ((5.0V))
VCC CDL TAPEL OUTL TUL NC TAPEH CDH
TUR CDR OUTR NC TAPER INR VEE VSS
0V 0V 0V 0V 0V 0V 0V 0V

C584 K0.001
R254 68K
R257 33K
R255 1.5K
R252 15K
R251 10K
C251 K0.001
R258 3.9K
R256 10K
R253 10K

IC503
VOUT VIN GND
5.1V 7.3V 0V
Q511
5.0V
C527 K470P
C526 6.3V220
0.3V
Q512
2.8V
0V
D511 RVD1SS133TA
D512 RVD1SS133TA
D516 RVD1SS133TA
R591 820
D522 RVDMTZJ6R2B

IC504
BA3936
POWER REGULATOR
IC504
CD 5V CD 8V AUDIO 8V FILTER TUNER 5V V.REF (+) MODE SW 8V LIN VCC STBY P.CNT GND
0V ((5.0V)) 0V ((8.0V)) 7.9V 1.2V ((0V))0V 15.1V 5.1V 0V ((4.7V))12.2V 8.0V 12.0V 3.4V 0V 0V
R546 1.5
R548 3.3K
R554 220
C525 M0.01
C533 25V47
C532 25V47
C534 10V100
C531 6.3V220
C530 25V100
C529 16V10
R547 18K

Q513,Q517
BN1A4MTA
POWER SUPPLY

Q513 12.0V 0.3V 11.9V
Q517 0.3V 12.0V

W501
VCC
+6V
GND
ACSTBY

CP501

TO C MAIN CIRCUIT (W502) (PAGE 21)

CP502
KEY2 KEY1 KEY0 SGND REMSTBY SLEEP POWER PGND REMIN SWVCC ACSTBY

D OPERATION CIRCUIT

R833 1W 15K
RB01 1.5K RB02 2.2K RB03 2.7K RB04 3.9K RB05 5.6K RB06 8.2K
RB14 1.5K RB13 2.2K RB12 2.7K RB11 3.9K RB10 5.6K RB09 8.2K RB08 15K
RB15 1.5K RB16 2.2K RB17 2.7K
S808 TAPE/STOP
S807 TAPE/PLAY
S806 TAPE REW
S805 TAPE FF
S804 CD SYNC REC
S803 REC PAUSE
S802 TAPE COUNTER RESET
S809 TIMER SET
S810 MEMORY/ADJUST
S811 TIMER CHECK
S812 TUN (-)
S813 TUN (+)
S814 VOL (-)
S815 VOL (+)
S816 EQUALIZER
S820 TUNER PRESET
S819 TUNER BAND
S818 CD/I
S817 CD CLR
S822 POWER
S821 SLEEP
R834 15K
R835 15K
D801
D802
Q801
4.3V 3.7V 3.0V
R822 270
R824 10K
R823 3.3K
Q801
2SC2785FTA
LED DRIVE
Z801
OUT VDD GND
L801 10μH
L802 10μH
C801 J0.01

E G.E.Q CIRCUIT

IC702
BU2040F-E2
I/O EXPANDER
2.9V...OFF 1.6V...SOFT
3.8V...XBS
3.8V...CLEAR 1.6V...VOCAL
3.5V...OFF 4.8V...XBS 3.1V...CLEAR 1.6V...VOCAL
C131 50V0.47
C711 K0.001
C710 10V100
C132 M2700P
C133 50V0.68
C134 16V10
C135 50V0.47
C701 10V47
7.8V 3.8V 5.3V 5.3V 5.2V 3.8V 3.9V 0V
VCC LCH IN NC TRE BTC2 BTC1 LCH OUT RIPPLE CONT TRE NC BCONT LOUD ADJ
GND IN RCH NC TRE BTC2 BTC1 OUT RCH CONT BAL CONT VOL NC LOUD VREF
0V 3.8V 5.3V 5.3V 5.2V 3.8V 2.5V 2.1V 5.0V 5.0V
R708 220
C236 K0.033
C136 K0.033
R132 1.5K
R232 1.5K
R133 330K
R233 330K
C708 10V100
C231 50V0.47
C232 M2700P
C233 50V0.68
C234 16V10
C235 50V0.47
C702 25V4.7
R703 2.2K
R704 47K
C703 M0.047
R706 47K
R705 47K
R701 27K
R702 27K
C137 K1000P
C237 K1000P
R134 470K
R234 470K
Q131
Q231
Q131,Q231
2SC2785FTA
BUFFER AMP

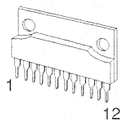
R722 8.2K
C704 K0.001
R721 15K
R720 82K
R719 82K
R718 39K
R717 120K
R716 390K
R715 220K
R714 1.5M
C712 50V1
R713 150K
C713 25V4.7
R710 56K
R711 27K
R712 120K
IC702
a DATA
b CLK
NC
CLEAR
SOFT
VOCAL
FLAT
LOUD2
LOUD1
NC
0V GND VCC 5.0V
0V CLEAR 0V R720 82K
0V SOFT 0V R719 82K
0V VOCAL 0V R718 39K
0V FLAT 0V R717 120K
0V LOUD2 0V R716 390K
0V LOUD1 0V R715 220K
0V NC 0V

G POWER SUPPLY CIRCUIT

S901
C
AC
DC
R901 470
D905 RVD1SS133TA
D901~D904 1N5402BM21
F901 125V 4A
T901
D902 D903 D904 D901
C902 Z0.01
C901 Z0.01
C904 Z0.01
C903 Z0.01
F902 125V 4A
FOR PC
W902
JK901 AC IN 120V 60Hz
+6V GND +12V
BACK UP FOR COMPUTER/CLOCK 4 "AA" SIZE BATTERIES 6V
BATTERY 8 "D" SIZE BATTERIES 12V
W901
R W

■ TERMINAL GUIDE OF ICs, TRANSISTORS & DIODES

AN7135



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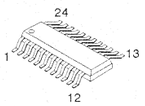
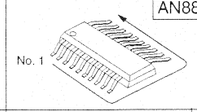


BU2040F-E2	16 pin
LA1831MSATEL	24 pin
LM7001M-TE-L	20 pin
AN8802SCE1V	42 pin



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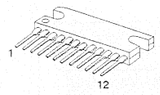

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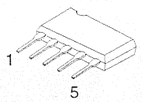

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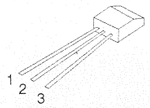

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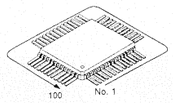

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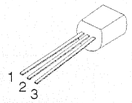

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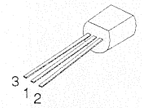

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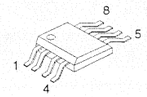

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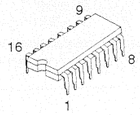

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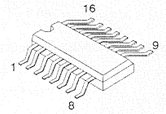

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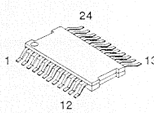

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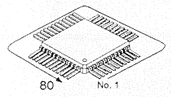

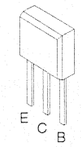

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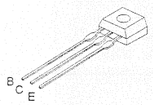
BA1A4MTA
BA1L4MTA
BN1A4MTA



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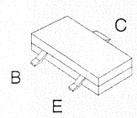
BN1L3NTA

2SB709S



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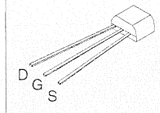

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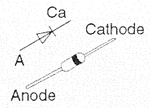

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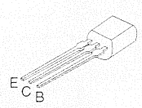
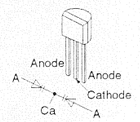


KV1360NT
KV1580NT



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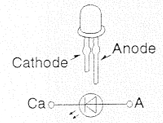
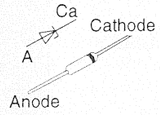
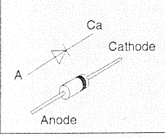


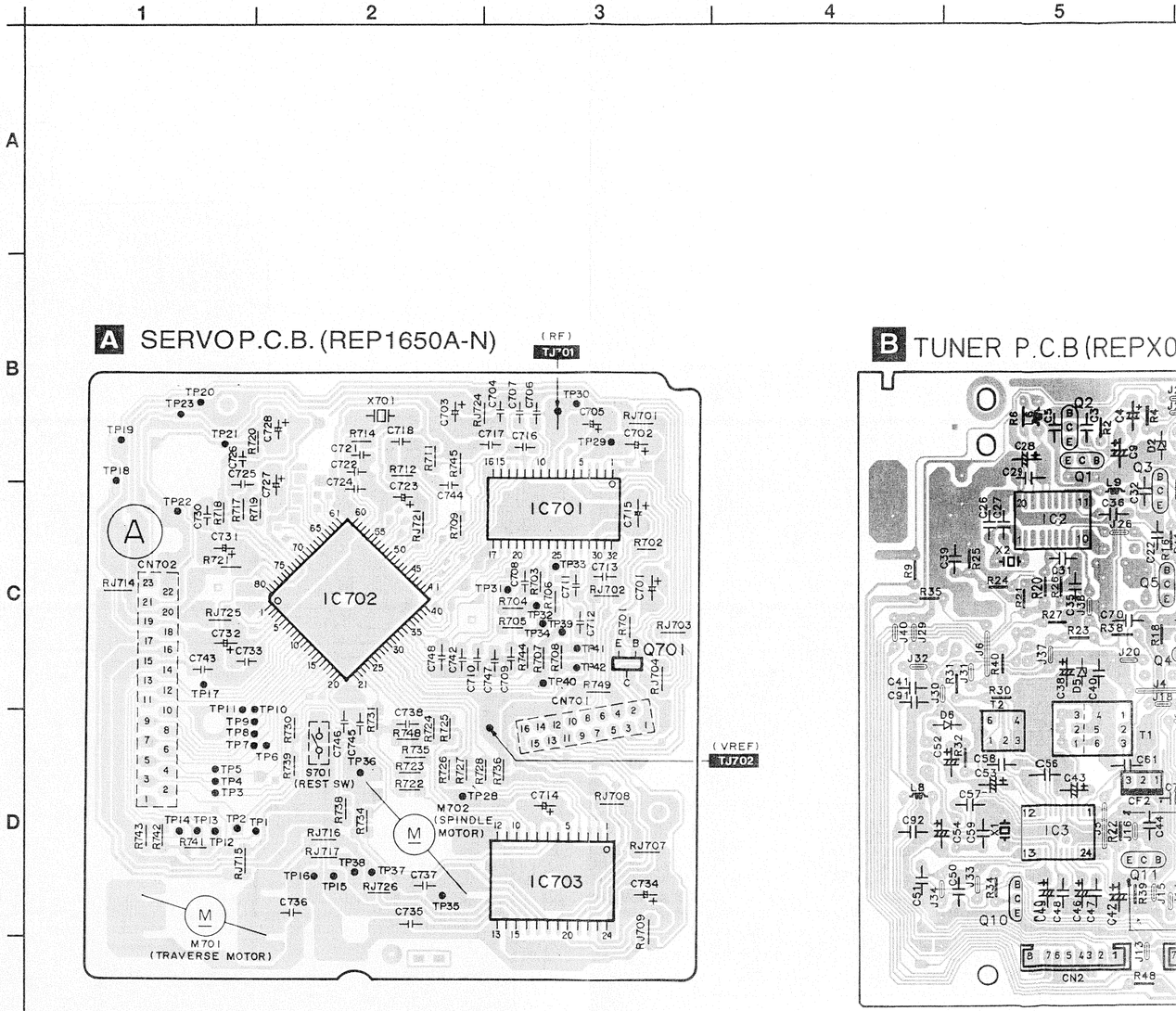


RVDMTZ4R7BTA
RVDMTZ5R6BTA
RVDMTZ6R8BTA
RVDMTZ7R5CTA
RVDMTZJ5R1B
RVDMTZJ5R1C
RVDMTZJ6R2B

1N5402BM21

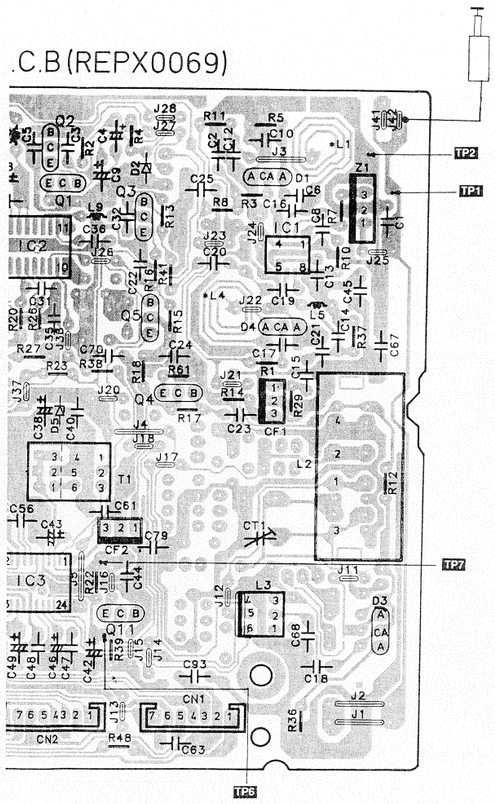


■ PRINTED CIRCUIT BOARD

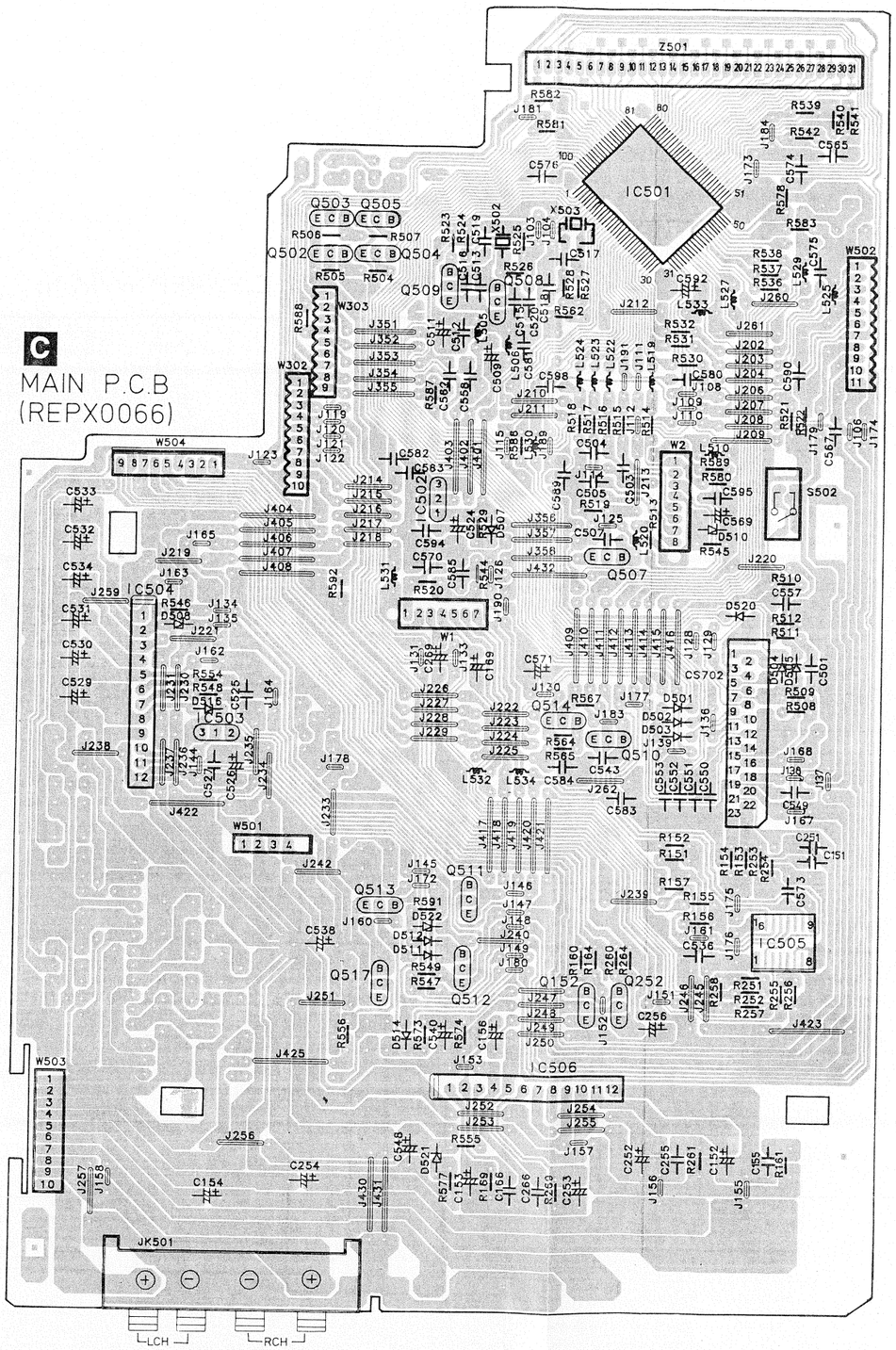


5 6 7 8 9 10 11 12 13 14

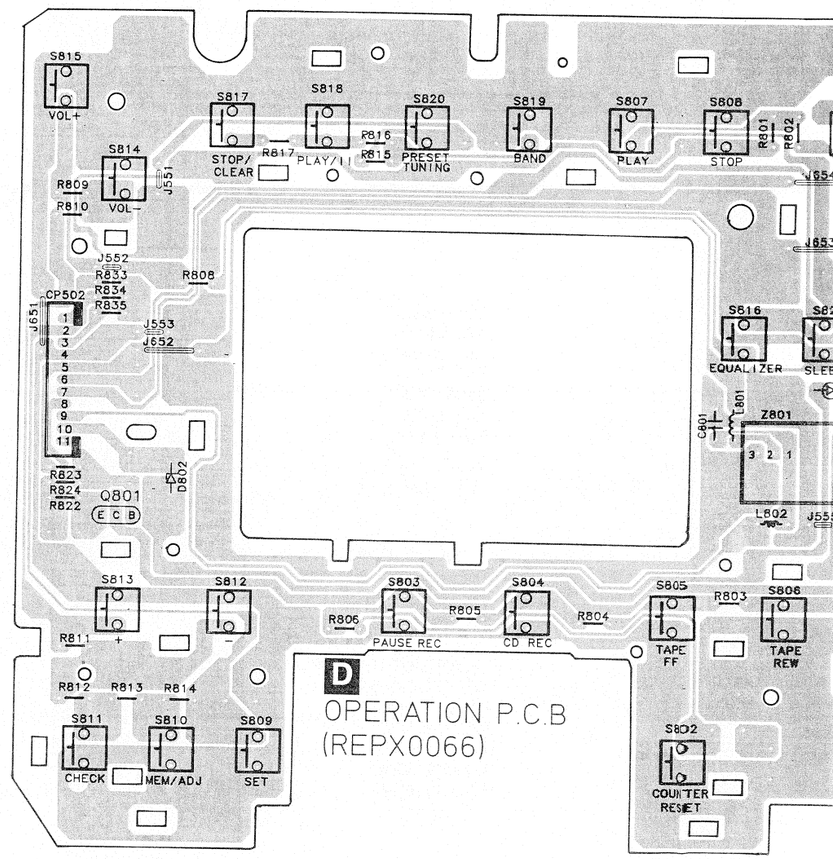
.C.B (REPX0069)



C
MAIN P.C.B
(REPX0066)

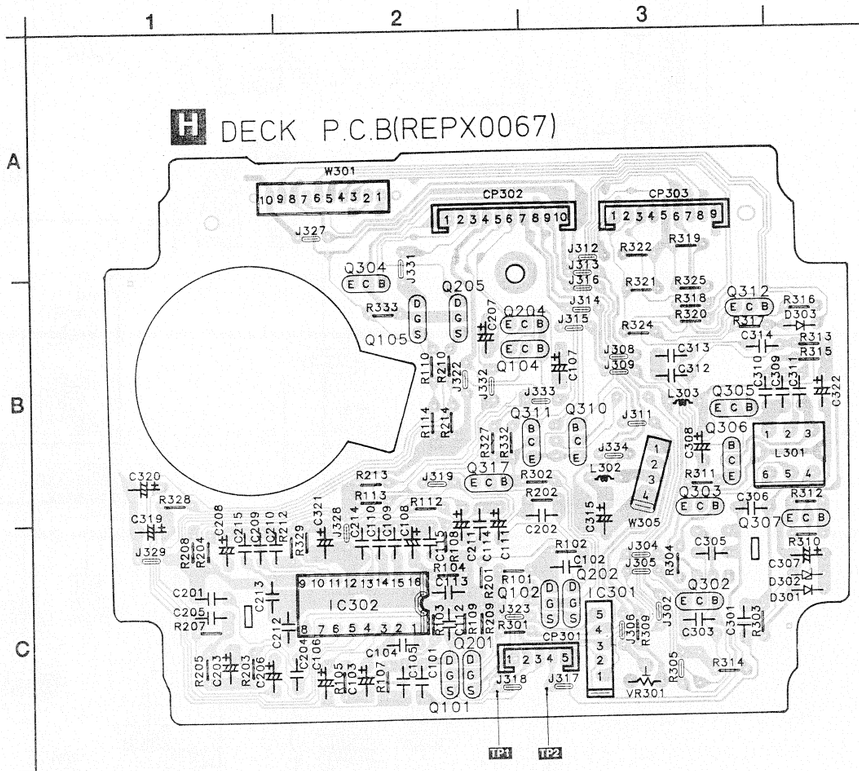


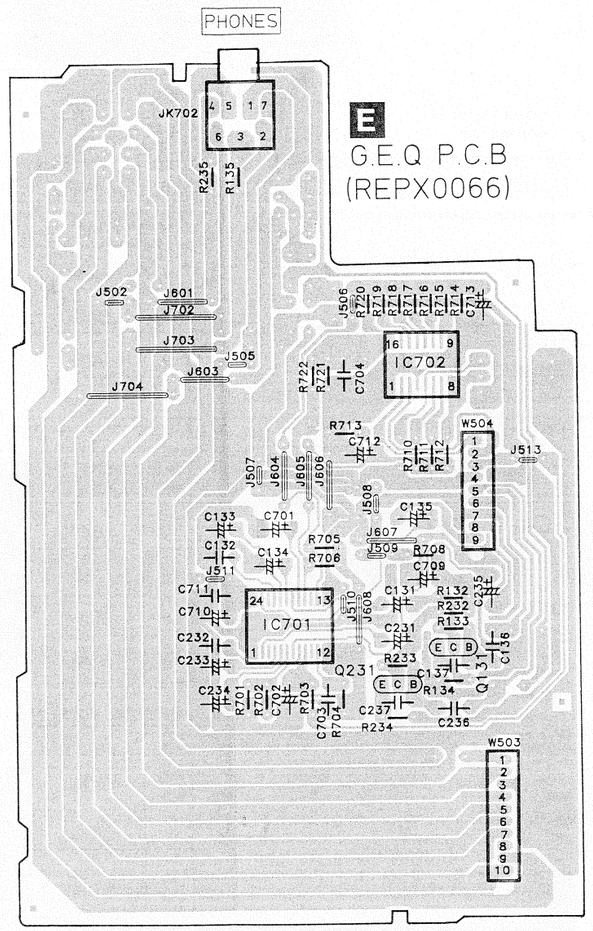
SPEAKERS OUT

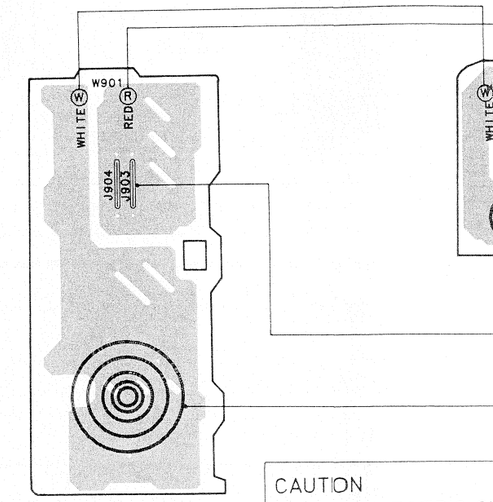


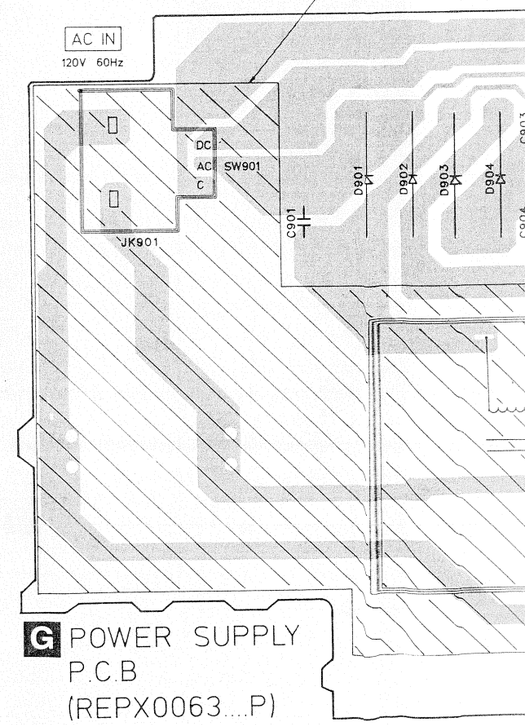
D
OPERATION P.C.B
(REPX0066)

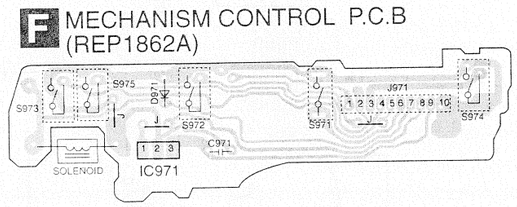
■ PRINTED CIRCUIT BOARD











CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F901 : 4 A 125V
F902 : 4A 125V

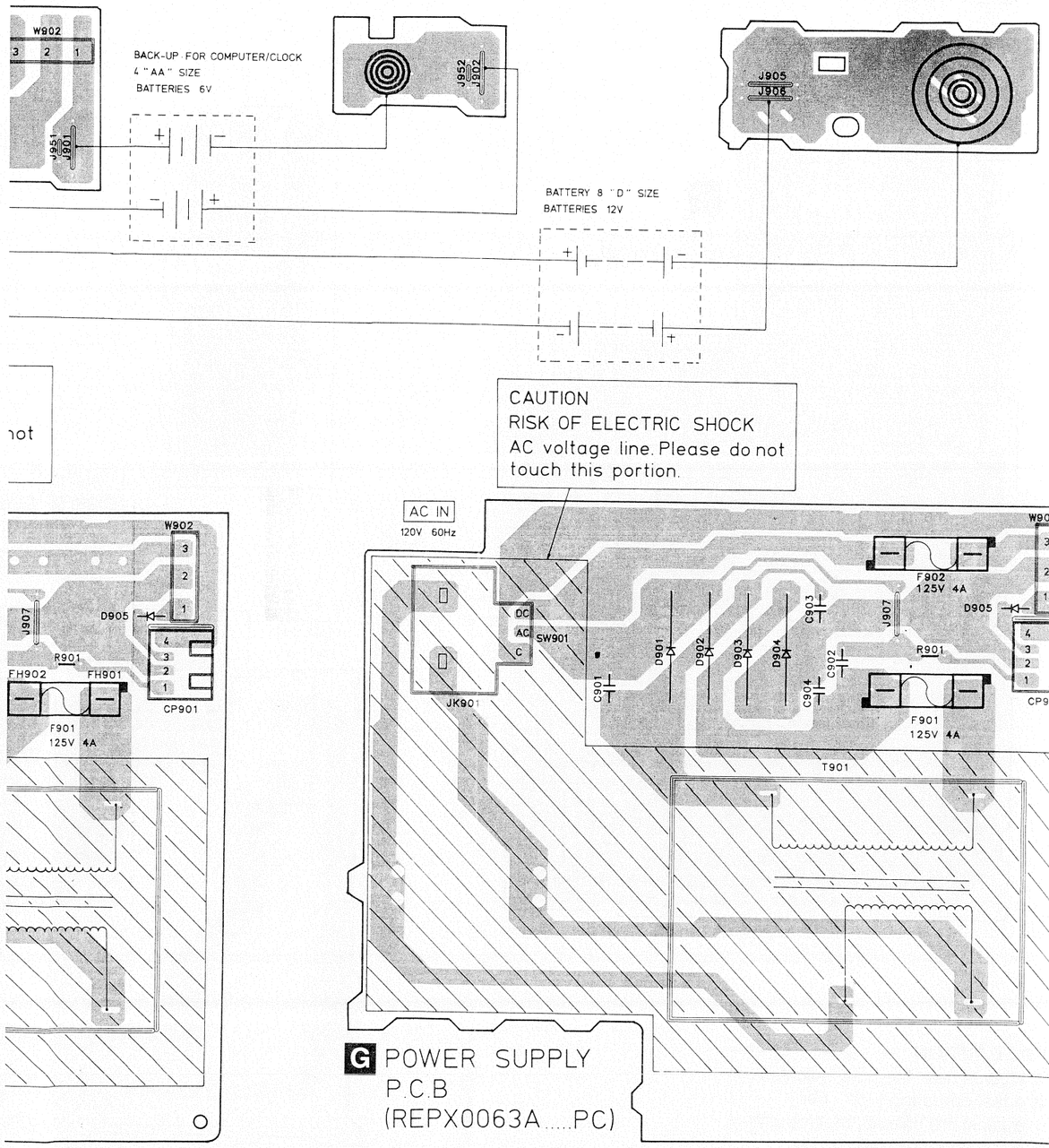
RISK OF FIRE-REPLACE USE AS MARKED

FUSE CAUTION

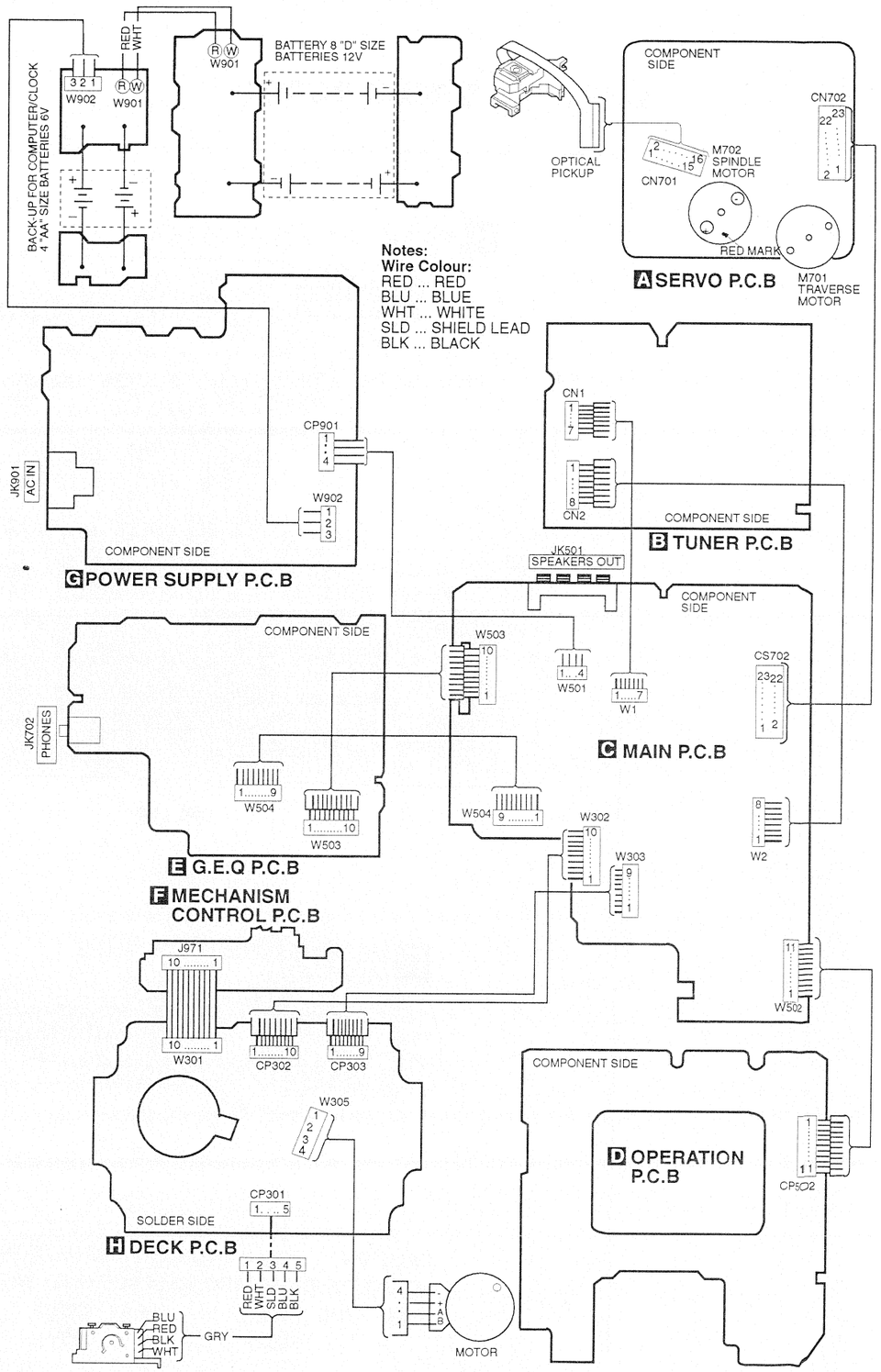
This symbol located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire hazard, replace with the same type fuse. For fuse rating, refer to the rating adjacent to the symbol.

Ce symbol indique que ie fusible utilisé est à rapide. Pour une protection permanente, n' utiliser que dès fusibles de même type. Ce demier est indiqué là qù le présent symbol est apposé.

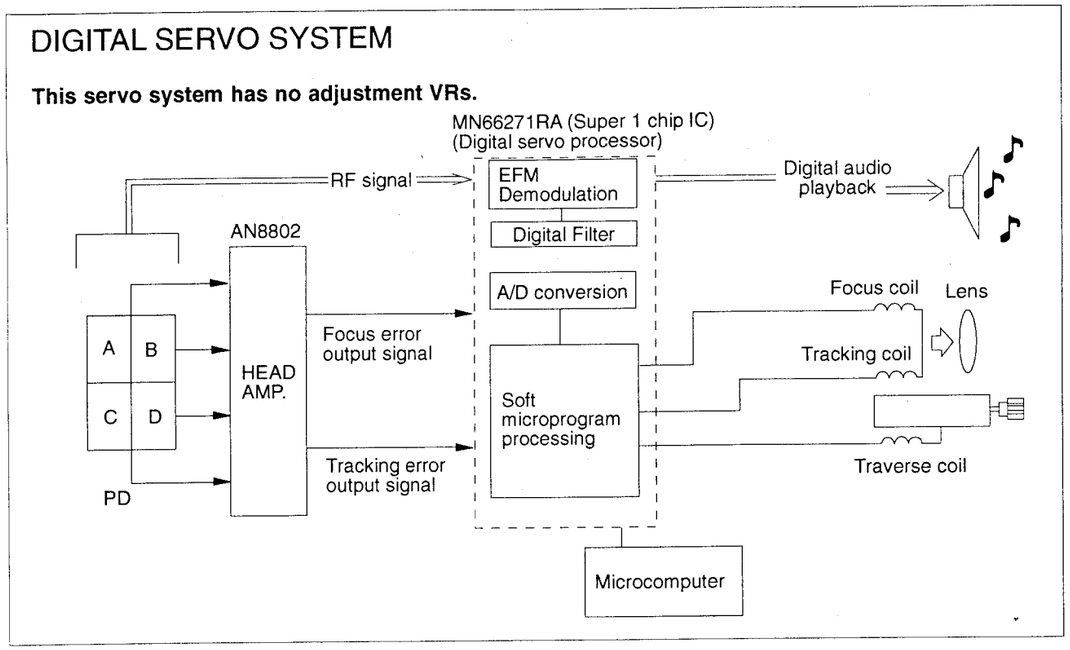
10 11 12 13 14



■ WIRING CONNECTION DIAGRAM

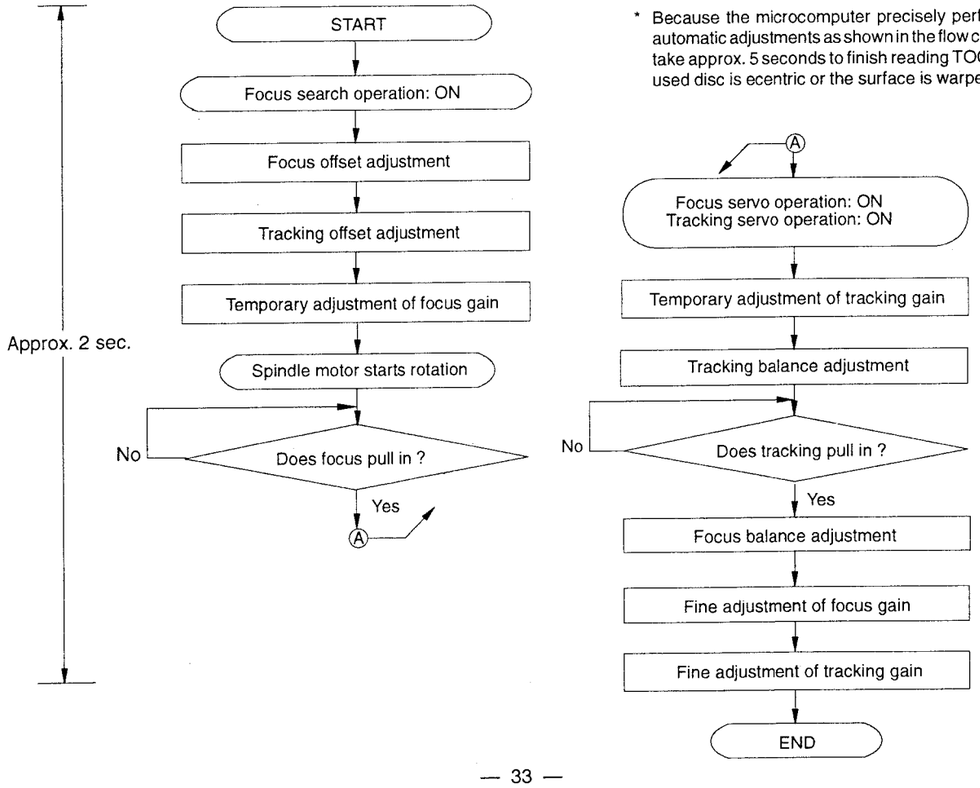


■ DIGITAL SERVO SYSTEM



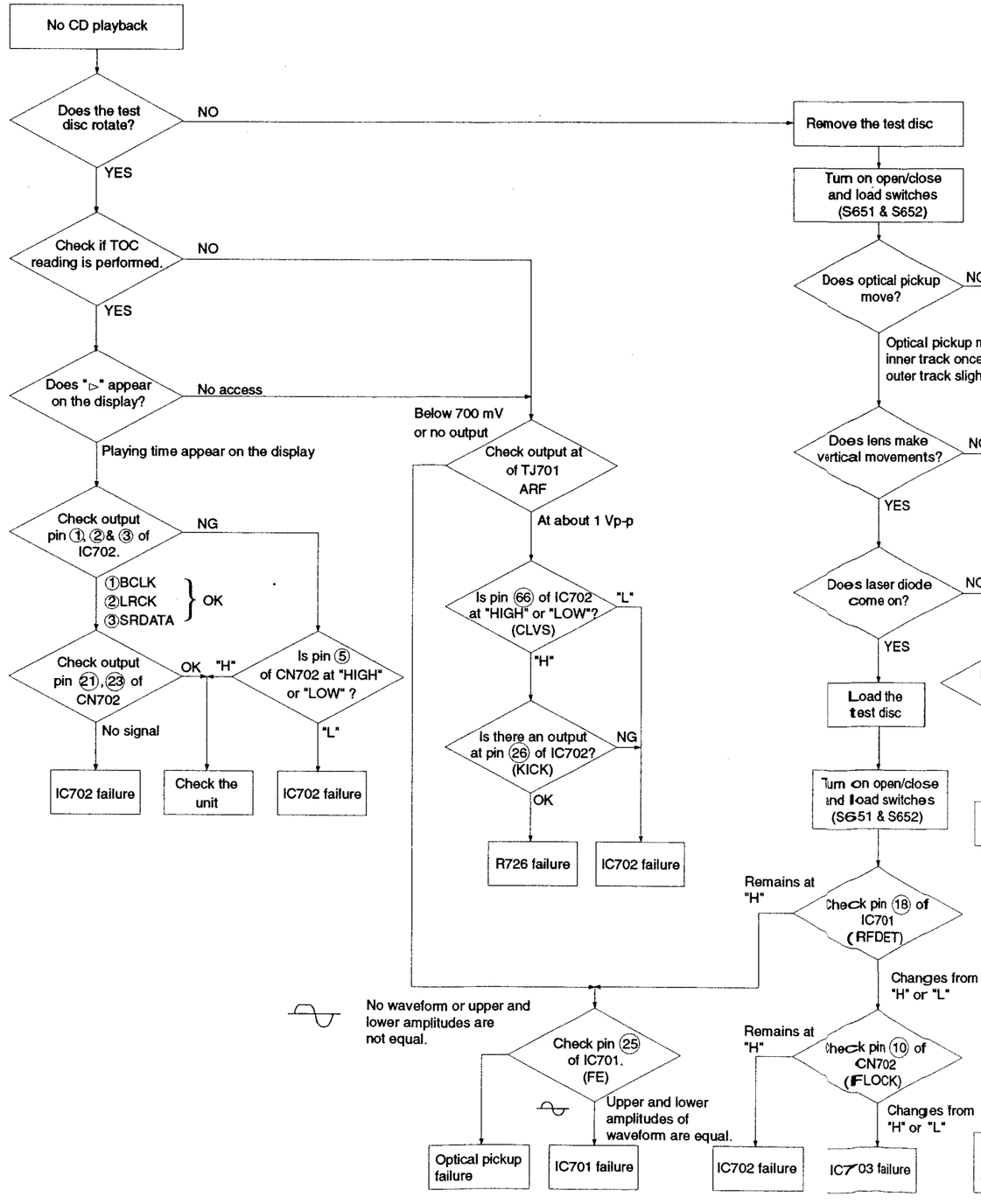
The following flow chart shows the sequence of automatic adjustments.

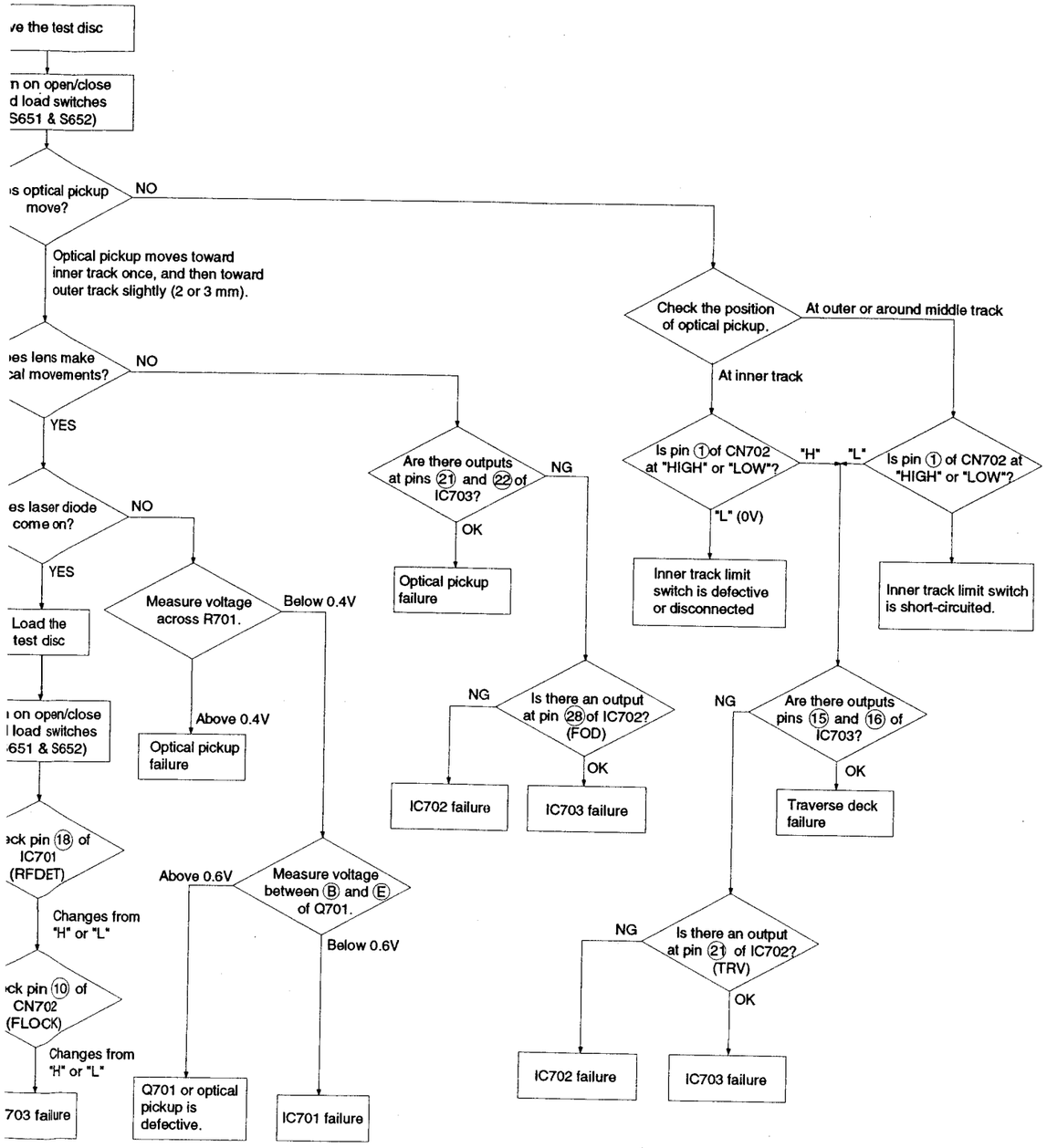
- **Flow chart on automatic adjustment sequence**



* Because the microcomputer precisely performs the automatic adjustments as shown in the flow chart, it will take approx. 5 seconds to finish reading TOC data if a used disc is ecentric or the surface is warped.

■ TROUBLESHOOTING GUIDE





■ TERMINAL FUNCTION OF IC'S

• IC701 (AN8802SCE1V)

Pin No.	Mark	I/O	Function
1	PDAD	I	PDA channel signal input with delay
2	PDA	I	PDA channel signal input without delay
3	LPD	I	Laser PD connection
4	LD	O	Power supply for LD driving
5	AMPI	I	RF amplifier input
6	VCC	I	Power supply connection
7	AMPO	O	RF amplifier output (Not used, open)
8	CAGC	I	AGC loop filter connection
9	ARF	O	RF AGC output
10	CENV	I	Capacitor connection for RF detection
11	CEA	I	Capacitor connection for HPF amplifier
12	GND	—	Ground connection
13	LDON	I	ON/OFF input of LD APC("H" : ON, "L" : OFF)
14	TES	I	Tracking error shunt signal input
15	PLAY	I	Play signal input ("H" : PLAY)
16	WVEL	I	Double speed ("H" : double, "L" : single)

Pin No.	Mark	I/O	Function
17	BDO	O	Dropout detection control
18	/RFDET	O	RF detection signal ("L" : detection)
19	CROSS	O	Tracking error zero cross output
20	OFTR	O	Off-track detection ("H" : detection)
21	VDET	O	Vibration detection signal output("H" : detection
22	ENV	O	Envelope output terminal
23	TEBPF	I	Vibration detection signal input
24	TE	O	Tracking error signal output
25	FE	O	Focus error signal output
26	PTO	O	Potentioamplifier inversion input (Not used, open)
27	PTI	I	Potentioamplifier inversion output (Not used, open)
28	TBAL	I	Tracking balance signal input
29	FBAL	I	Focus balance signal input
30	VREF	O	Reference voltage output
31	PDB	I	Photo detection Bch input without delay
32	PDBD	I	Photo detection Bch input with delay

• IC703 (AN8389SE1)

Pin No.	Mark	I/O	Function
1	VCC	I	Power supply terminal
2	VREF	I	Reference voltage input
3	IN4	I	Motor driver (4) input
4	IN3	I	Motor driver (3) input
5	GND	—	Ground connection
6	NC	—	Ground connection
7	NRESET	I	Reset input
8	GND	—	Ground connection
9	IN2	I	Motor driver (2) input
10	PC2	I	PC2 (power cut) input
11	IN1	I	Motor driver (1) input
12	PC1	I	PC1 (power cut) input (Not used, open)

Pin No.	Mark	I/O	Function
17	PVCC1	I	Power supply (1) for driver
18	PGND1	—	Ground connection (1) for driver
19	D1–	O	Motor driver (1) reverse-action output
20	D1+	O	Motor driver (1) forward-action output
21	D2–	O	Motor driver (2) reverse-action output
22	D2+	O	Motor driver (2) forward-action output
23	D3–	O	Motor driver (3) reverse-action output
24	D3+	O	Motor driver (3) forward-action output
25	D4–	O	Motor driver (4) reverse-action output
26	D4+	O	Motor driver (4) forward-action output
27	PGND2	—	Ground connection (2) for driver
28	PVCC2	I	Power supply (2) for driver

• IC702 (MN66271RA)

Pin No.	Mark	I/O	Function
1	BCLK	O	Serial bit clock terminal (Not used, open)
2	LRCK	O	L/R discriminating signal (Not used, open)
3	SRDATA	O	Serial data (Not used, open)
4	DVDD1	I	Power supply (digital circuit) terminal
5	DVSS1	—	GND (digital circuit) terminal
6	TX	O	Digital audio interface signal
7	MCLK	I	Microprocessor command clock signal
8	MDATA	I	Microprocessor command data signal
9	MLD	I	Microprocessor command load signal
10	SENSE	O	Sense signal output (OFT,FESL,MAGEND,NAJEND,POSAD,SFG)
11	/FLOCK	O	Optical servo condition(focus)("L" : lead-in)
12	/TLOCK	O	Optical servo condition(tracking)("L" : lead-in)
13	BLKCK	O	Sub-code block clock (f=75Hz)
14	SQCK	I	External clock signal input for sub-code Q register
15	SUBQ	O	Sub-code Q code output
16	DMUTE	I	Muting input ("H" : mute)
17	STAT	O	Status signal output (CRC,CUE,CLVS,TTSTVP,FCLV,SQCK)
18	/RST	I	Reset input
19	SMCK	O	1/2-divided clock signal of crystal oscillating at MSEL = "H" (fSMCK=8.4672MHz) 1/4-divided clock signal of crystal oscillating at MSEL="L" (fSMCK=4.2336MHz)
20	PMCK	O	1/192-divided clock signal of crystal oscillating (fPMCK=88.2kHz) (Not used, open)
21	TRV	O	Traverse servo control output
22	TVD	O	Traverse drive signal output
23	PC	O	Spindle motor ON signal output ("L" : ON)
24	ECM	O	Spindle motor drive signal output (forced mode output)
25	ECS	O	Spindle motor drive signal output (servo error signal output)
26	KICK	O	Kick pulse output
27	TRD	O	Tracking drive output
28	FOD	O	Focus drive output
29	VREF	I	D/A (drive) output (TVD,ECS,TRD,FOD, FBAL,TBAL) Reference voltage input.
30	FBAL	O	Focus balance adjustment output (Not used,open)
31	TBAL	O	Tracking balance adjustment output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF envelope signal input
35	VDET	I	Vibration detection signal input ("H" : detection)
36	OFT	I	Off-track signal input ("H" : off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal input ("L" : detection)
39	BDO	I	Dropout signal input ("H" : Dropout)
40	LDON	O	Laser on signal output ("H" : ON)
41	TES	O	Tracking error shunt signal output ("H" : shunt)
42	PLAY	O	Play signal out ("H" : PLAY)
43	WVEL	O	Double speed status signal output ("H" : DS)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias (Not used, open)
47	DSLF	I/O	DSL loop filter
48	PLLF	I/O	PLL loop filter
49	VCOF	I/O	VCO loop filter (Not used, open)
50	AVDD2	I	Power supply input (for analog circuit)
51	AVSS2	—	GND (for analog circuit)
52	EFM	O	EFM signal output (Not used, open)
53	PCK	O	PLL extraction clock ouput (Not used, open) (fPCK=4.321 MHz during normal playback)
54	PDO	O	Phase comparison signal of EFM and PCK signals (Not used, open)
55	SUBC	O	Sub-code serial data output (Not used, open)
56	SBCK	I	Clock input for sub-code serial data (Not used, open)
57	VSS	—	GND
58	X1	I	Crystal oscillating circuit input (f=16.9344MHz)
59	X2	O	Crystal oscillating circuit output (f= 16.9344MHz)
60	VDD	I	Power supply input (for oscillating circuit)
61	BYTCK	O	Byte clock output (Not used, open)
62	/CLDCK	O	Sub-code frame clock signal output (fCLDCK=7.35kHz during normal playback)

Pin No.	Mark	I/O	Function
63	FCLK	O	Crystal frame clock signal output (fCLK=7.35kHz, double=14.7kHz)
64	IPFLAG	O	Interpolation flag output ("H" : interpolation) (Not used, open)
65	FLAG	O	Flag output (Not used, open)
66	CLVS	O	Spindle servo phase synchronizing signal output ("H" : CLV, "L" : rough servo) (Not used, open)
67	CRC	O	Sub-code CRC checked output ("H" : OK, "L" : NG) (Not used, open)
68	DEMPH	O	De-emphasis ON signal output ("H" : ON) (Not used, open)
69	RESY	O	Frame resynchronizing signal output (Not used, open)
70	/RST2	I	Reset input through MASH circuit ("L" : Reset)
71	/TEST	I	Test input
72	AVDD1	I	Power supply input (for analog circuit)

Pin No.	Mark	I/O	Function
73	OUTL	O	Left channel audio signal output
74	AVSS1	—	GND
75	OUTR	O	Right channel audio signal output
76	RSEL	I	RF signal polarity assignment input (at "H" level, RSEL="H", at "L" level, RESL="L")
77	CSEL	I	Crystal oscillating frequency designation input "L" : 16.9344MHz "H" : 33.8688MHz
78	PSEL	I	Test input (normally "L") (Not used, open)
79	MSEL	I	Output mode switching of SUBQ terminal ("H" : Q code buffer mode)
80	SSEL	I	Output frequency switching for SMCK terminal "H" : SMCK=8.4672MHz "L" : SMCK=4.2336MHz (Not used, open)

• IC501 (UPD78063G021)

Pin No.	Mark	I/O	Function
1	NC	—	No connection
2	SQCK	O	CD subcode clock output.
3	STAT	I	CD status signal input.
4	MBP1	O	Microprocessor beat proof control signal output.
5	MBP2	O	Microprocessor beatproof control signal output.
6	VSS	—	GND
7	XOUT	O	clock input (4.19 MHz)
8	XIN	I	Clock input (4.19 MHz)
9	VDD	I	Power supply (+5 V)
10	XT IN	I	Crystal oscillator input (32.768 kHz)
11	XT OUT	O	Crystal oscillator output (32.768 kHz)
12	$\overline{\text{RESET}}$	I	System reset signal input.
13	REMIN	I	Remote control signal input.
14	$\overline{\text{POWER}}$	I	Power switch.
15	$\overline{\text{SLEEP}}$	I	Sleep switch.
16	BLKCK	I	CD subcode block clock signal input.
17	REST SW	I	Reset switch (S701) signal input.
18	CD REST	I	CD reset signal input.
19	$\overline{\text{CLOSE}}$	I	CD cover close detectionswitch signal input.
20	$\overline{\text{DOLBY}}$	O	Dolby control signal output.

Pin No.	Mark	I/O	Function
21	PLL DA	O	PLL tuner data signal output.
22	PLL CE	O	PLL tuner strove signal output.
23	PLL CL	O	PLL tuner clock signal output.
24	MONO	O	PLL mono signal output.
25	TUNED	I	PLL tuner tuning signal input.
26	STEREO	I	PLL tuner stereo signal input.
27	AVSS	—	GND
28	KEY0	I	Key source input.
29	KEY1	I	Key source input.
30	KEY2	I	Key source input.
31	ADIN1	I	AD converter input (Deck operation switch)
32	ADIN2	I	AD converter input (Deck operation switch)
33	BATT	I	Battery state signal input.
34	RMTSTBY	I	Remote control sensor power control signal input.
35	VCCDET	I	Power supply detection signal input.
36	AVDD	I	+5 V
37	AVREF	I	AD converter reference voltage (+ 5V)
38	MUTEA	O	AF muting control signal output.
39	FUNC	O	Power supply control signal output.
40	VSS	—	GND

Pin No.	Mark	I/O	Function
41	VCLK	O	PWM clock signal output for I/O expander circuit (IC702).
42	VDATA	O	PWM data signal output for I/O expander circuit (IC702).
43	VOL	O	Motor (for volume) control signal output
44	CDH	O	Input selector control signal (CD)
45	TAPEH	O	Input selector control signal output (TAPE)
46	A3	—	GND
47	A2	—	GND
48	A1	—	GND
49	BEEP	—	Not used, open
50	PWCNT	O	Power Amp control signal output
51	COM0	O	LCD common signal output.
52	COM1	O	LCD common signal output.
53	COM2	O	LCD common signal output.
54	COM3	O	LCD common signal output.
55	BIAS	I	Bias reference signal input.
56	VLC0	I	LCD bias reference voltage input.
57	VLC1	I	LCD bias reference voltage input.
58	VLC2	I	LCD bias reference voltage input.
59	VSS	—	GND
60	S0	O	LCD segment signal output.
61	S1	O	LCD segment signal output.
62	S2	O	LCD segment signal output.
63	S3	O	LCD segment signal output.
64	S4	O	LCD segment signal output.
65	S5	O	LCD segment signal output.
66	S6	O	LCD segment signal output.
67	S7	O	LCD segment signal output.
68	S8	O	LCD segment signal output.
69	S9	O	LCD segment signal output.
70	S10	O	LCD segment signal output.

Pin No.	Mark	I/O	Function
71	S11	O	LCD segment signal output.
72	S12	O	LCD segment signal output.
73	S13	O	LCD segment signal output.
74	S14	O	LCD segment signal output.
75	S15	O	LCD segment signal output.
76	S16	O	LCD segment signal output.
77	S17	O	LCD segment signal output.
78	S18	O	LCD segment signal output.
79	S19	O	LCD segment signal output.
80	S20	O	LCD segment signal output.
81	S21	O	LCD segment signal output.
82	S22	O	LCD segment signal output.
83	S23	O	LCD segment signal output.
84	S24	O	LCD segment signal output.
85	S25	O	LCD segment signal output.
86	S26	O	LCD segment signal output.
87	NC	—	Not used
88	$\overline{BP3}$	O	Beat proof control (Bit 3)
89	$\overline{BP2}$	O	Beat proof control (Bit 2)
90	RECH	O	Input selector control signal utput(REC).
91	PLNG	O	Deck plunger control signal output.
92	MOTOR	O	Motor control signal output for deck circuit.
93	$\overline{DMT}$	O	Deck muting control signal output.
94	$\overline{TLOCK}$	I	Tracking servo clock signal input.
95	$\overline{FLOCK}$	I	Focus servo clock signal input.
96	MCLK	O	Microprocessor command clocksignal output.
97	MDATA	O	Microprocessor command datasignal output.
98	MLD	O	Microprocessor command signal output.
99	SENSE	I	CD sense signal input.
100	SUBQ	I	CD subcode Q data input.

■ MECHANISM PARTS LIST

Notes : [M] in Remarks column indicates parts supplied by **MESA**

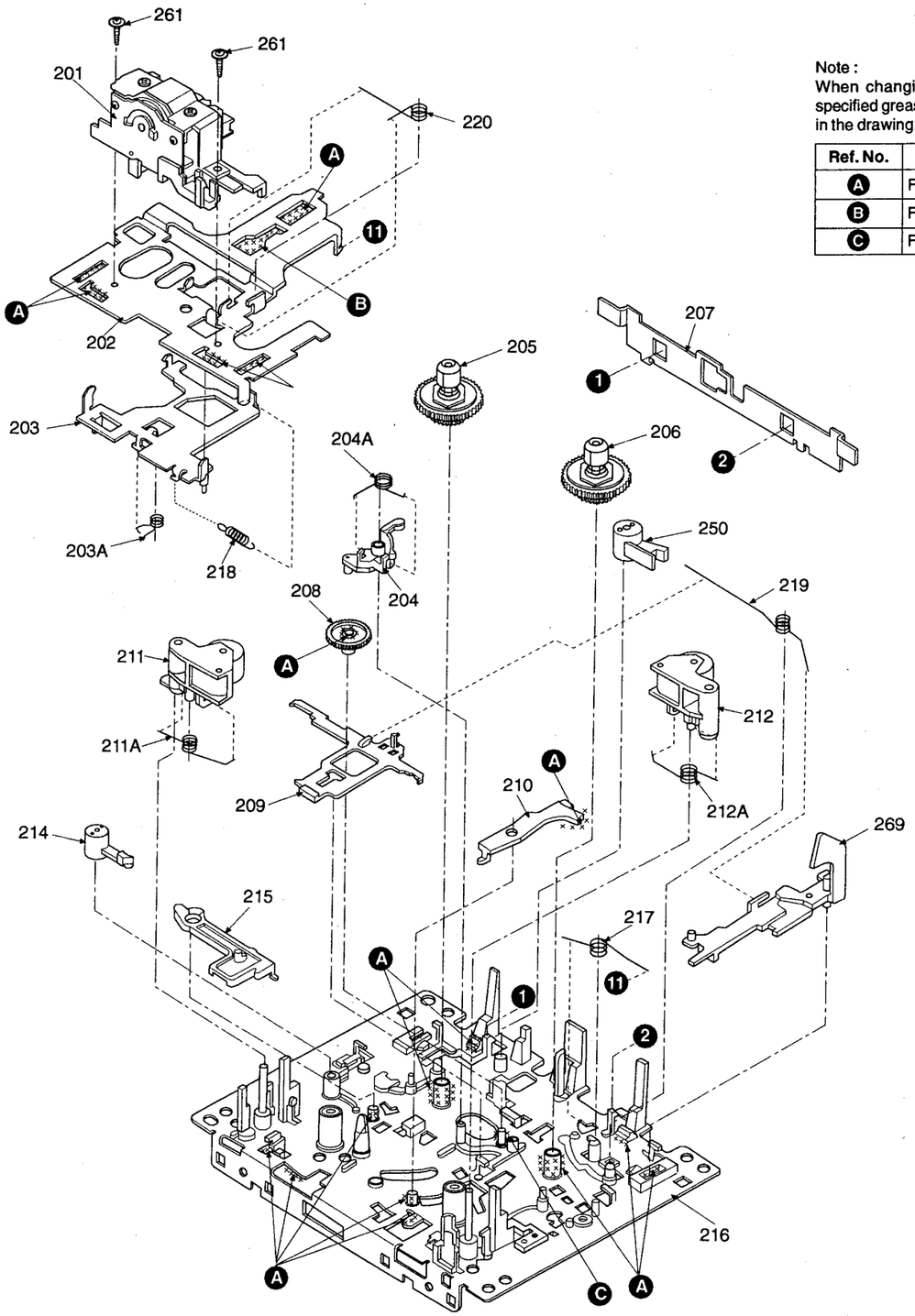
Ref No.	Part No.	Part Name & Description	Remarks
201	RXQ0291	HEAD BLOCK ASS'Y	
202	RUA793ZF	CHASSIS	
203	RZLAR300A	LEVER ASS'Y	
203A	RUW143ZA	SPRING	
204	1UB0089Z	ARM	
204A	RUW148ZA	SPRING	
205	1DM0018ZB	REEL TABLE ASS'Y	
206	1DM0017ZB	REEL TABLE ASS'Y	
207	RML0069-1	LEVER	
208	RDG5772ZC	GEAR	
209	RUB508ZB	LEVER	
210	RUB506ZB	LEVER	
211	1UB0088ZB	PINCH ROLLER	
211A	RUW141ZA	SPRING	
212	1UB0087ZB	PINCH ROLLER	
212A	RUW140ZB	SPRING	
214	RNL1ZD	ARM	
215	RUB503ZD	LEVER	
216	RZUAR300A	CHASSIS ASS'Y	
217	RUW142ZA	SPRING	
218	RUD105ZA	SPRING	
219	RUW144ZA	SPRING	
220	RUW139ZA	SPRING	
221	RFM133ZA	MOTOR ASS'Y	
222	1UE0015ZB	PLUNGER	
223	RUB428ZE	SHAFT	
224	RUL1030YA	PLATE	
225	RMD5014ZC	SPACER	
226	RDG5927ZG	GEAR	
227	1DW0037ZB	FLYWHEEL ASS'Y	
227A	RNW139ZA	WASHER	
228	1DW0038ZB	FLYWHEEL ASS'Y	
228A	RNW138ZA	WASHER	
229	1DG0006ZB	GEAR ASS'Y	
230	RUB513ZD	LEVER	
231	1UB0091Z	LEVER	
231A	RUW146ZA	SPRING	
232	1DR0011ZB	PULLEY ASS'Y	
233	RDV90ZB	BELT	
234	RDG5769ZA	GEAR	
235	RUQ111ZB	SPRING	
236	RUW145ZA	SPRING	
237	1UB0090ZA	ROD	
237A	RUB512ZB	ROD	
238	RDG5773ZA	GEAR	
239	RUQ112ZA	SPRING	

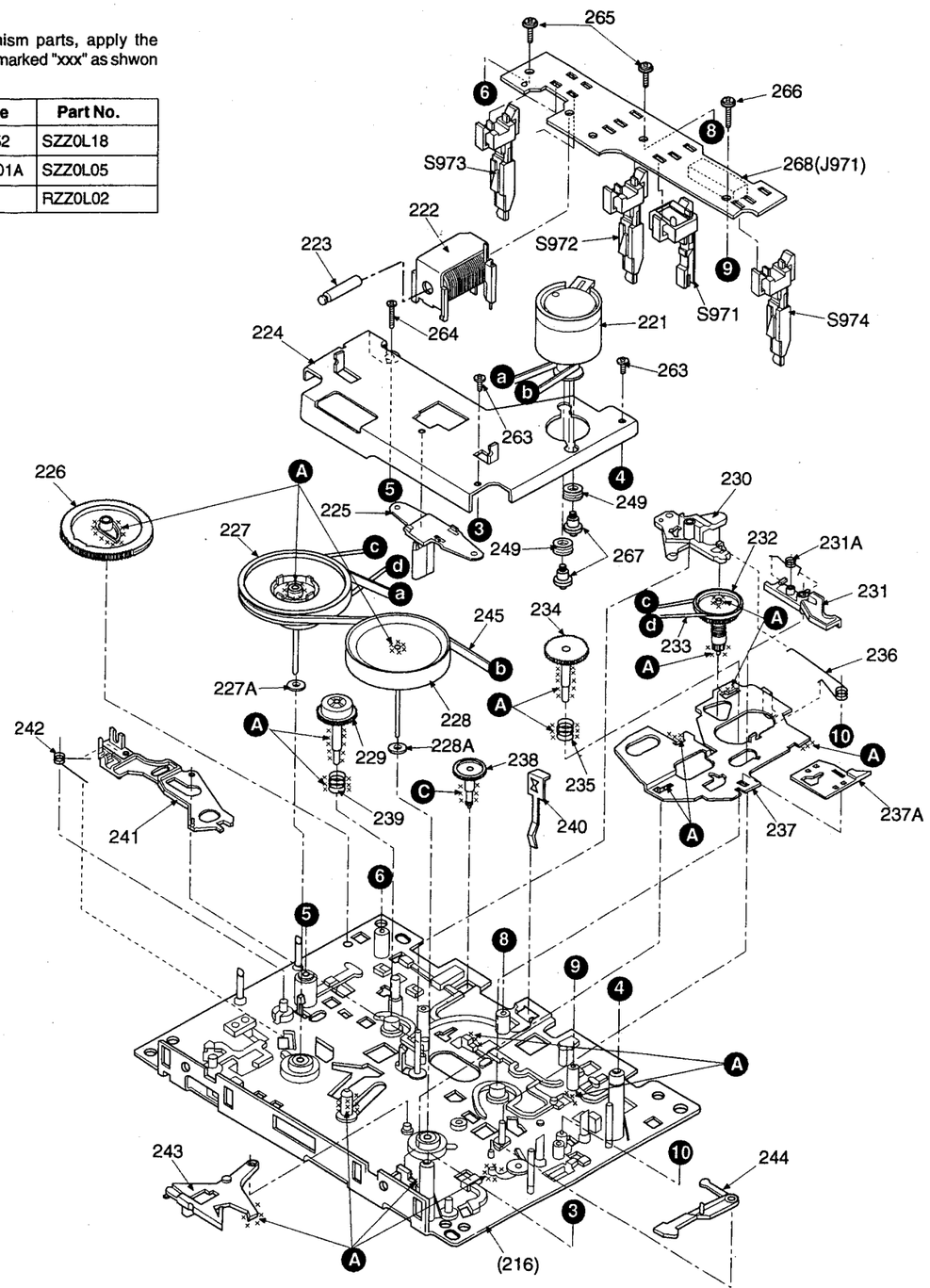
Ref No.	Part No.	Part Name & Description	Remarks
240	RUS609ZC	SPRING	
241	RUB514ZC	LEVER	
242	RUW147ZA	SPRING	
243	RUB515ZA	LEVER	
244	RUB509ZA	LEVER	
245	RDV108ZA	BELT	
249	RMG0102-1	RUBBER	
250	RNL180ZB	LEVER	
261	XTW2+6L	SCREW	
263	XTN26+7J	SCREW	
264	RHE5203ZA	SCREW	
265	XTW2+8S	SCREW	
266	XYC2+JF16	SCREW	
267	RHD26002	SCREW	
268	RJS10T7ZA	SOCKET (J971)	
269	RUB507ZD	EJECT ROD (R)	

■ MECHANISM PARTS LOCATION • (RAA0363)

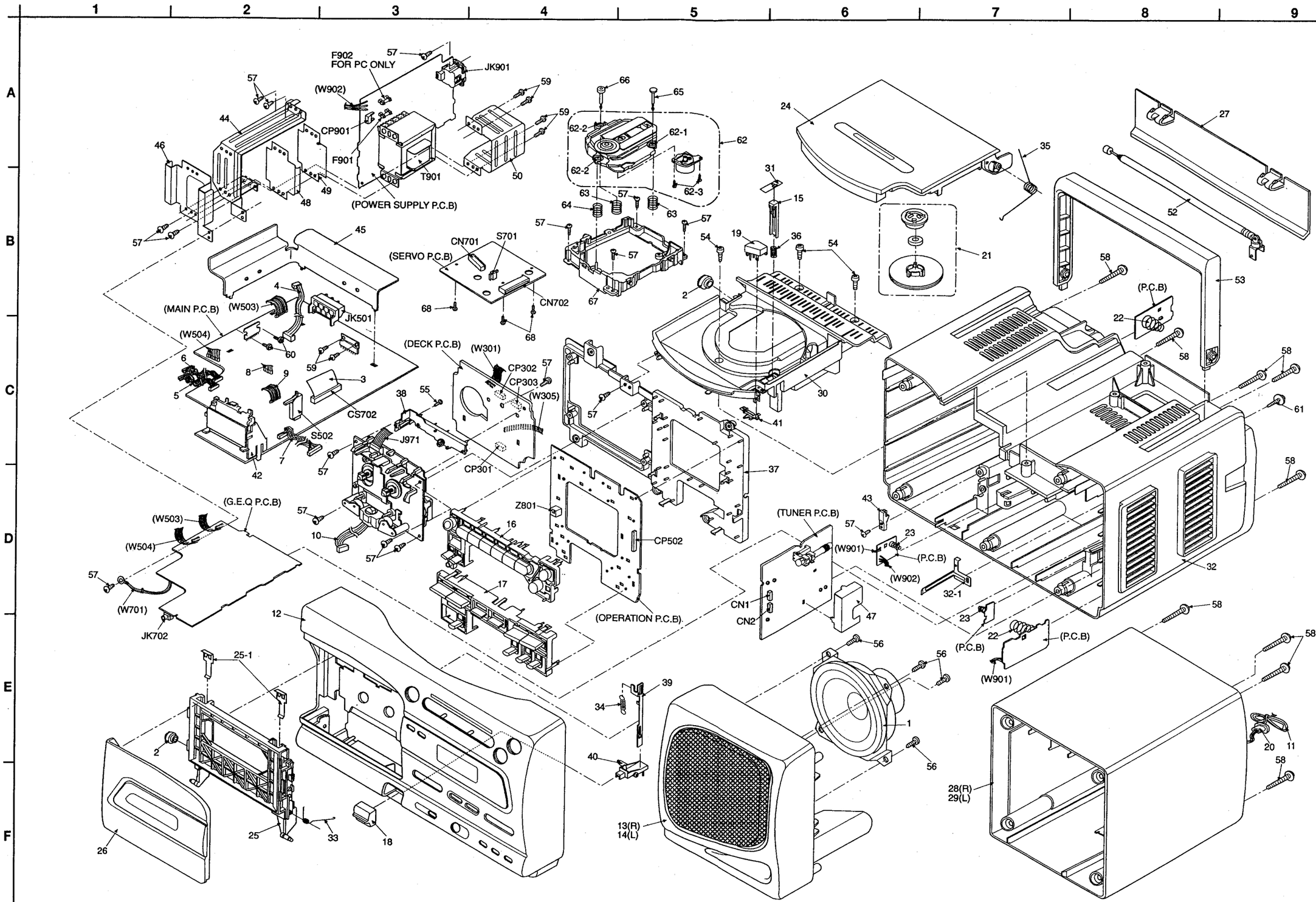
Note :
When changing mechanism parts, apply the specified grease to areas marked "xxx" as shwon in the drawing.

Ref. No.	Part Name	Part No.
A	FLOILAK-152	SZZ0L18
B	FLOIL GP-501A	SZZ0L05
C	FLOIL947P	RZZ0L02





■ CABINET PARTS LOCATION



■ REPLACEMENT PARTS LIST

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc. are used.
When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.
* [M] Indicates in the Remarks columns indicates parts supplied by MESA.
* The "(SF)" mark denotes the standard part.
* Remote Control Units :
Supply period for three years from terminal of production.
* Warning: This product uses a laser dioe. Refer to caution statements on page 2.

Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	EASG10P542A2	WOOFER	[M]
2	RDG0183-L	DAMPER GEAR	[M]
3	REEX0015-1	FFC WIRE	[M]
4	REXX0078	MAIN TO POWER 9P	[M]
5	REXX0079	MAIN TO DECK 9P	[M]
6	REXX0080	MAIN TO DECK 10P	[M]
7	REXX0081	MAIN TO PANEL 12P	[M]
8	REXX0082	MAIN TO TUNER 7P	[M]
9	REXX0083	MAIN TO TUNER 8P	[M]
10	REXX0086	MECHA HEAD WIRE	[M]
11	REXX0089	SPEAKER CORD	[M]
12	RFKGXE250P-K	FRONT CABINET ASS'Y	[M]
13	RFKGXE250PAK	SP. FRONT CAB. (R)	[M]
14	RFKGXE250PBK	SP. FRONT CAB. (L)	[M]
15	RGQX0005-K	CD LEAF SWITCH LEVER	[M]
16	RGUX0052-K	TUNING/CASS. BUTTON	[M]
17	RGUX0053A-H	CD FUNCTION BUTTON	[M]
18	RGUX0054-H	CASS. EJECT BUTTON	[M]
19	RGUX0055-H	CD EJECT BUTTON	[M]
20	RHG2152ZA	CORD BUSHING	[M]
21	RFKNXDT680PB	CD CLAMPER ASS'Y	[M]
22	RJC511ZBS	MAIN BATT. SPRING	[M]
23	RJCX0001	BACKUP BATT. SPRING	[M]
24	RFKKXE250P-K	CD LID ASS'Y	[M]
25	RFKLXE250PAK	CASS. HOLDER ASS'Y	[M]
25-1	RUS757ZAA	CASSETTE HALF SPRING	[M]
26	RFKLXE250P-K	CASS. LID ASS'Y	[M]
27	RKK347ZB-7	BATTERY COVER	[M]
28	RFKHXE250PAK	SPK. BACK CAB. (R)	[M]
29	RFKHXE250PBK	SPK. BACK CAB. (L)	[M]
30	RKQX0003-H	TOP CABINET	[M]
31	RKWX0043-K	CD LEAF SWITCH PANEL	[M]
32	RFKHXE250P-K	BACK CABINET ASS'Y	[M] (P)
32	RFKHXE250PCK	BACK CABINET ASS'Y	[M] (PC)
32-1	RMAX0012	ROD ANTENNA PLATE	[M]
33	RMB0293	CASS. HOLDER OPEN	[M]
34	RMB0295-1	CASSETTE EJECT LEVER	[M]
35	RMBX0006	CD LID OPEN SPRING	[M]
36	RMBX0007	CD LEAF SWITCH LEVER	[M]
37	RMKX0005	CHASSIS	[M]
38	RMKX0006	MECHA CHASSIS	[M]
39	RMLX0007	CASSETTE EJECT LEVER	[M]
40	RMLX0008	CASS. EJECT HOLDER	[M]
41	RMLX0009-KJ	CD EJECT LEVER	[M]
42	RMNX0005-W	LCD HOLDER	[M]
43	RMR0631-K	PCB HOLDER	[M]
44	RMYX0008	TRANSF. BRACKET	[M]
45	RMYX0009	HEAT SINK	[M]
46	RMYX0010	TRANSFORMER SUPPORT	[M]
47	RSC0314	TUNER SHIELD PLATE	[M]
48	RSCX0022	TRANSF. SHIELD PLATE	[M]
49	RSCX0023	TRANSF. SHIELD PLATE	[M]
50	RSCX0024	TRANSF. SHIELD PLATE	[M]
52	XEARR175ED-Y	ROD ANTENNA	
53	RFKNXE250P-K	HANDLE ASS'Y	[M]
54	XTN3+10CFZ	TOP CAB SCREW	
55	XTV26+6F	MECHA CHASSIS SCREW	
56	XTV3+10G	SPEAKER SCREW	
57	XTV3+12G	MOUNTING SCREW	
58	XTV3+20G	CASING SCREW	
59	XTV3+8F	SCREW FOR AN7135	
60	XTW3+10F	SCREW FOR BA3936	
61	XYN3+F8FY	ROD ANTENNA SCREW	
62	RAE0113Z	TRAVERSE UNIT	
62-1	SHGD112	FLOATING RUBBER (A)	
62-2	SHGD113-1	FLOATING RUBBER (B)	
62-3	XQS2+A35FZ	SCREW	
63	RME0109	FLOATING SPRING A	
64	RME0142	FLOATING SPRING B	
65	RMS0123-1	FIXED PIN A	
66	RMS0350	FIXED PIN B	
67	RMR0698-K	TRAVERSE CHASSIS	
68	XTV2+6G	SCREW	

Ref No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUITS	
IC1	TA7358FMATEL	IC, FM RF	
IC2	LM7001M-TE-L	IC, PLL	
IC3	LA1831MSATEL	IC, IF MPX	
IC301	BA7755A	IC, SWITCH	
IC302	TA8142AP	IC, PB/REC PRE-AMP	
IC501	UPD78063G021	IC, MICROPROCESSOR	[M]
IC502	S8053HNB-T	IC, RESET	
IC503	S81350HG-T	IC, 5V REGULATOR	[M] ⚠
IC504	BA3936	IC, REGULATOR	⚠
IC505	UPD4052BG-E2	IC, SELECTOR	[M]
IC506	AN7135	IC, POWER AMP	
IC701	TA8184FMATEL	IC, SOUND PROCESSOR	
IC702	BU2040F-E2	IC, I/O EXPANDER	[M]
IC971	DN6851ALB	IC, HALL	(DECK)
		TRANSISTORS	
Q1	2SC2785FTA	TRANSISTOR	
Q2	2SC2785FTA	TRANSISTOR	
Q3	2SC2787FL1TA	TRANSISTOR	
Q4	2SC2787LTA	TRANSISTOR	
Q5	BN1L3NTA	TRANSISTOR	[M]
Q10	BA1A4MTA	TRANSISTOR	[M]
Q11	2SA1175FTA	TRANSISTOR	[M]
Q101	2SJ40CDTA	TRANSISTOR	
Q102	2SJ40CDTA	TRANSISTOR	
Q104	2SC2785FTA	TRANSISTOR	
Q105	2SJ40CDTA	TRANSISTOR	
Q131	2SC2785FTA	TRANSISTOR	
Q152	2SD1020HTA	TRANSISTOR	[M]
Q201	2SJ40CDTA	TRANSISTOR	
Q202	2SJ40CDTA	TRANSISTOR	
Q204	2SC2785FTA	TRANSISTOR	
Q205	2SJ40CDTA	TRANSISTOR	
Q231	2SC2785FTA	TRANSISTOR	
Q252	2SD1020HTA	TRANSISTOR	[M]
Q302	2SC2785FTA	TRANSISTOR	
Q303	2SD1450STA	TRANSISTOR	
Q304	BA1A3QTA	TRANSISTOR	[M]
Q305	2SC2785FTA	TRANSISTOR	
Q306	2SC2785FTA	TRANSISTOR	
Q307	2SC2785FTA	TRANSISTOR	
Q310	BA1A3QTA	TRANSISTOR	[M]
Q311	BA1A3QTA	TRANSISTOR	[M]
Q312	2SC2785FTA	TRANSISTOR	

Ref No.	Part No.	Part Name & Description	Remarks
Q317	BN1L3NTA	TRANSISTOR	[M]
Q502	2SB621RTA	TRANSISTOR	
Q503	2SB1030RTA	TRANSISTOR	
Q504	BA1A4MTA	TRANSISTOR	[M]
Q505	BA1A4MTA	TRANSISTOR	[M]
Q507	BN1L3NTA	TRANSISTOR	[M]
Q508	2SC2785FTA	TRANSISTOR	
Q509	2SC2785FTA	TRANSISTOR	
Q510	BA1A3QTA	TRANSISTOR	[M]
Q511	BN1L3NTA	TRANSISTOR	[M]
Q512	BA1L4MTA	TRANSISTOR	[M]
Q513	BN1A4MTA	TRANSISTOR	[M]
Q514	2SC2785FTA	TRANSISTOR	
Q517	BN1A4MTA	TRANSISTOR	[M]
Q801	2SC2785FTA	TRANSISTOR	
		DIODES	
D1	KV1360NT	DIODE	
D2	RVDMTZ7R5CTA	DIODE	[M]
D3	KV1580NT	DIODE	
D4	KV1360NT	DIODE	
D5	RVDMTZJ5R1C	DIODE	[M]
D6	RVD1SS133TA	DIODE	
D301	RVD1SS133TA	DIODE	
D302	RVDMTZ4R7BTA	DIODE	
D303	RVD1SS133TA	DIODE	
D501	RVD1SS133TA	DIODE	
D502	RVD1SS133TA	DIODE	
D503	RVD1SS133TA	DIODE	
D504	RVD1SS133TA	DIODE	
D505	RVD1SS133TA	DIODE	
D507	RVD1SS133TA	DIODE	
D508	RVDMTZ6R8BTA	DIODE	
D510	RVDMTZJ5R1B	DIODE	[M]
D511	RVD1SS133TA	DIODE	
D512	RVD1SS133TA	DIODE	
D514	RVD1SS133TA	DIODE	
D516	RVD1SS133TA	DIODE	
D520	RVD1SS133TA	DIODE	
D521	RVDMTZ5R6BTA	DIODE	
D522	RVDMTZJ6R2B	DIODE	[M]
D801	SLR33VC160	DIODE	[M]
D802	RVDMTZ5R6BTA	DIODE	
D901	1N5402BM21	DIODE	⚠
D902	1N5402BM21	DIODE	⚠
D903	1N5402BM21	DIODE	⚠
D904	1N5402BM21	DIODE	⚠

Ref No.	Part No.	Part Name & Description	Remarks
D905	RVD1SS133TA	DIODE	
D971	RVD1SS133TA	DIODE	(DECK)
		VARIABLE RESISTORS	
VR301	RVNCC73B1T-A	VR, TAPE SPEED	
		VARIABLE CAPACITORS	
CT1	RCV10AF1T-S	TRIMMER CAPACITOR	
		SWITCHES	
S502	RSH1A012-U	SW, CD LEAF	
S802	EVQ21405R	SW, COUNTER RESET	
S803	EVQ21405R	SW, REC PAUSE	
S804	EVQ21405R	SW, CD REC	
S805	EVQ21405R	SW, TAPE FF	
S806	EVQ21405R	SW, TAPE REW	
S807	EVQ21405R	SW, TAPE PLAY	
S808	EVQ21405R	SW, TAPE STOP	
S809	EVQ21405R	SW, SET	
S810	EVQ21405R	SW, MEM / ADJ	
S811	EVQ21405R	SW, CHECK	
S812	EVQ21405R	SW, TUNING (-)	
S813	EVQ21405R	SW, TUNING (+)	
S814	EVQ21405R	SW, VOLUME (-)	
S815	EVQ21405R	SW, VOLUME (+)	
S816	EVQ21405R	SW, EQUALIZER	
S817	EVQ21405R	SW, CD STOP/CLEAR	
S818	EVQ21405R	SW, CD PLAY/PAUSE	
S819	EVQ21405R	SW, TUNER BAND	
S820	EVQ21405R	SW, TUNER PRESET	
S821	EVQ21405R	SW, SLEEP	
S822	EVQ21405R	SW, POWER	
S901	RJJ1SM02-H	SW, AC	⚠
S971	RSH1A89ZD-U	SW, MODE DETECT	
S972	RSH1A90YD-U	SW, TAPE DETECT	
S973	RSH1A90YD-U	SW, TAB DETECT	
S974	RSH1A90YD-U	SW, TAB DETECT	
		CONNECTORS	
CN1	RJP7G18ZA	CONNECTOR (07P)	
CN2	RJP8G18ZA	CONNECTOR (08P)	
CN504	RJS1A5209	CONNECTOR (09P)	[M]
CP301	RJP5G18ZA	CONNECTOR (05P)	
CP302	RJP10G18ZA	CONNECTOR (10P)	
CP303	RJP9G18ZA	CONNECTOR (09P)	
CP501	RJP4G9YA	CONNECTOR (04P)	
CP502	RJP11G18ZA	CONNECTOR (11P)	
CS702	RJS1A6823	FFC CONNECTOR	
		COILS & TRANSFORMERS	
L2	RLV2C016-0Z	AM F ANT	[M]
L3	RL02B008-T	AM OSC COIL	
L5	RLQZP8R2JT-Y	COIL	
L6	RLQA101JT-D	COIL	[M]
L8	RLQZP4R7KT-Y	COIL	
L9	RLQZPR47KT-Y	COIL	
L301	RL08C002M-T	BIAS OSC COIL	
L302	RLQZB470KT-D	COIL	
L303	RLQZB470KT-D	COIL	
L505	RLQZP100KT-Y	COIL	
L506	RLQZP100KT-Y	COIL	
L510	RLQA2R2JT-D	COIL	[M]
L519	RLQZP100KT-Y	COIL	
L520	RLQA101JT-D	COIL	[M]
L522	RLQA2R2JT-D	COIL	[M]
L523	RLQA2R2JT-D	COIL	[M]
L524	RLQZPR47KT-Y	COIL	
L525	RLQA2R2JT-D	COIL	[M]
L527	RLQA2R2JT-D	COIL	[M]
L529	RLQZPR47KT-Y	COIL	
L530	RLQA2R2JT-D	COIL	[M]
L531	RLQZPR47KT-Y	COIL	
L532	RLQA2R2JT-D	COIL	[M]
L533	RLQZPR47KT-Y	COIL	
L534	RLQZP221KT-Y	COIL	
L801	RLQA101JT-D	COIL	[M]
L802	RLQA101JT-D	COIL	[M]
T1	RLI2Z010-T	AM IFT	
T2	RLI4B014-T	FM DET COIL	
T901	RTP1L1C004-X	POWER TRANSFORMER	[M] ⚠
		COMPONENT COMBINATION	
Z1	RCRBMT002-H	BEATPROOF FILTER	
Z501	RSL5108-L	LCD	[M]
Z801	RCDGP1U58XD	REMOTE CON. SENSOR	
		CERAMIC FILTERS	
CF1	RLFFETWLA02D	FM IF CF	
CF2	RLFFETWLA02D	FM IF CF	

Ref No.	Part No.	Part Name & Description	Remarks
		OSCILLATORS	
X1	RSXZ456KM01	CERALOCK	
X2	RSXC7M20S04T	XTAL 7.2MHZ	
X502	RSXZ4M19M01T	4.19MHZ CERALOCK	
X503	RSXD32K7S02	32.7KHZ CRYSTAL	[M]
		FUSES	
F901	XBA1C40NBAL	FUSE	[M] ⚠
F902	XBA1C40NBAL	FUSE	[M](PC) ⚠
		FUSE HOLDERS	
FH901	EYF52BC	FUSE HOLDER	
FH902	EYF52BC	FUSE HOLDER	
FH903	EYF52BC	FUSE HOLDER	(PC)
FH904	EYF52BC	FUSE HOLDER	(PC)
		JACKS	
JK501	RJF1098ZA-H	JK, SPEAKER	[M]
JK702	RJJ37TK01-C	JK, H.P.	[M]
JK901	RJJ1SM02-H	JK, JACKWITH SWITCH	⚠
		PACKING MATERIALS	
P1	RPGX0143	GIFT BOX	[M] (PC)
P1	RPGX0142	GIFT BOX	[M] (P)
P2	RPNX0042	POLYFOAM	[M]
P3	RPH3SZA	MIRAMAT SHEET	[M]
		ACCESSORIES	
A1	RQT2492-P	INSTRUCTION MANUAL	[M] (P)
A1	RFKSXE250PCK	INST. MANUAL ASS'Y	[M] (PC)
A2	SJA172	AC CORD	(SF) ⚠
A3	EUR642195	REMO-CON UNIT	[M]

Ref No.	Part No.	Part Name & Description	Remarks
		< SERVO P.C.B. >	
		INTEGRATED CIRCUITS	
IC701	AN8802SCE1V	IC, HEAD AMP	
IC702	MN66271RA	IC, DIGITAL LSI	
IC703	AN8389SE1	IC, 4-CH DRIVER	
		TRANSISTORS	
Q701	2SB709S	TRANSISTOR	
		SWITCHES	
S701	RSM0006-P	SW, RESET	
		CONNECTORS	
CN701	RJU035T016-1	16 PIN FFC CONNECTOR	
CN702	RJS1A6723-1Q	23 PIN FFC CONNCETOR	
		OSCILLATORS	
X701	RSXZ16M9M02T	CERAMIC OSC	

■ RESISTORS & CAPACITORS

Notes: * Capacitor values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
* [M] Indicates in the values & remarks column indicates parts supplied by **MESA**

Ref. No.	Part No.	Values & Remarks
	RESISTORS	
R1	ERDS2TJ104T	100K 1/4W
R2	ERDS2TJ152T	1.5K 1/4W
R3	ERDS2TJ104T	100K 1/4W
R4	ERDS2TJ103T	10K 1/4W
R5	ERDS2TJ104T	100K 1/4W
R6	ERDS2TJ102T	1K 1/4W
R7	ERDS2TJ330T	33 1/4W
R8	ERDS2TJ332T	3.3K 1/4W
R9	ERDS2TJ102T	1K 1/4W
R10	ERDS2TJ101T	100 1/4W
R11	ERDS2TJ151T	150 1/4W
R12	ERDS2TJ103T	10K 1/4W
R13	ERDS2TJ104T	100K 1/4W
R14	ERDS2TJ471T	470 1/4W
R15	ERDS2TJ102T	1K 1/4W
R16	ERDS2TJ102T	1K 1/4W
R17	ERDS2TJ334T	330K 1/4W
R18	ERDS2TJ331T	330 1/4W
R20	ERDS2TJ103T	10K 1/4W
R21	ERDS2TJ103T	10K 1/4W
R22	ERDS2TJ334T	330K 1/4W
R23	ERDS2TJ392T	3.9K 1/4W
R24	ERDS2TJ103T	10K 1/4W
R25	ERDS2TJ103T	10K 1/4W
R26	ERDS2TJ103T	10K 1/4W
R27	ERDS2TJ103T	10K 1/4W
R29	ERDS2TJ331T	330 1/4W
R30	ERDS2TJ183T	18K 1/4W
R31	ERDS2TJ333T	33K 1/4W
R32	ERDS2TJ332T	3.3K 1/4W
R34	ERDS2TJ223T	22K 1/4W
R35	ERDS2TJ390T	39 1/4W
R36	ERDS2TJ104T	100K 1/4W
R37	ERDS2TJ153T	15K 1/4W
R38	ERDS2TJ104T	100K 1/4W
R39	ERDS2TJ223T	22K 1/4W
R40	ERDS2TJ221T	220 1/4W
R41	ERDS2TJ561T	560 1/4W
R48	ERDS2TJ390T	39 1/4W
R61	ERDS2TJ100T	10 1/4W
R101	ERDS2TJ474T	470K 1/4W
R102	ERDS2TJ103T	10K 1/4W
R103	ERDS2TJ820T	82 1/4W
R104	ERDS2TJ102T	1K 1/4W
R105	ERDS2TJ103T	10K 1/4W
R107	ERDS2TJ274T	270K 1/4W
R108	ERDS2TJ822T	8.2K 1/4W
R109	ERDS2TJ123T	12K 1/4W
R110	ERDS2TJ102T	1K 1/4W
R112	ERDS2TJ470T	47 1/4W
R113	ERDS2TJ472T	4.7K 1/4W
R114	ERDS2TJ472T	4.7K 1/4W
R132	ERDS2TJ152T	1.5K 1/4W
R133	ERDS2TJ334T	330K 1/4W
R134	ERDS2TJ471T	470 1/4W
R135	ERDS2TJ151T	150 1/4W
R151	ERDS2TJ103T	10K 1/4W
R152	ERDS2TJ153T	15K 1/4W
R153	ERDS2TJ103T	10K 1/4W
R154	ERDS2TJ683T	68K 1/4W
R155	ERDS2TJ152T	1.5K 1/4W
R156	ERDS2TJ103T	10K 1/4W
R157	ERDS2TJ333T	33K 1/4W
R158	ERDS2TJ392T	3.9K 1/4W
R160	ERDS2TJ273T	27K 1/4W
R161	ERDS2TJ4R7T	4.7 1/4W
R164	ERDS2TJ472T	4.7K 1/4W
R169	ERDS2TJ683T	68K 1/4W
R201	ERDS2TJ474T	470K 1/4W
R202	ERDS2TJ103T	10K 1/4W
R203	ERDS2TJ820T	82 1/4W
R204	ERDS2TJ102T	1K 1/4W
R205	ERDS2TJ103T	10K 1/4W
R207	ERDS2TJ274T	270K 1/4W
R208	ERDS2TJ822T	8.2K 1/4W
R209	ERDS2TJ123T	12K 1/4W
R210	ERDS2TJ102T	1K 1/4W
R212	ERDS2TJ470T	47 1/4W
R213	ERDS2TJ472T	4.7K 1/4W
R214	ERDS2TJ472T	4.7K 1/4W
R232	ERDS2TJ152T	1.5K 1/4W
R233	ERDS2TJ334T	330K 1/4W
R234	ERDS2TJ471T	470 1/4W
R235	ERDS2TJ151T	150 1/4W
R251	ERDS2TJ103T	10K 1/4W
R252	ERDS2TJ153T	15K 1/4W
R253	ERDS2TJ103T	10K 1/4W
R254	ERDS2TJ683T	68K 1/4W
R255	ERDS2TJ152T	1.5K 1/4W
R256	ERDS2TJ103T	10K 1/4W
R257	ERDS2TJ333T	33K 1/4W
R258	ERDS2TJ392T	3.9K 1/4W
R260	ERDS2TJ273T	27K 1/4W
R261	ERDS2TJ4R7T	4.7 1/4W
R264	ERDS2TJ472T	4.7K 1/4W
R269	ERDS2TJ683T	68K 1/4W
R301	ERDS2TJ474T	470K 1/4W
R302	ERDS2TJ104T	100K 1/4W
R303	ERDS2TJ103T	10K 1/4W
R304	ERDS2TJ182T	1.8K 1/4W
R305	ERDS2TJ182T	1.8K 1/4W
R309	ERDS2TJ123T	12K 1/4W
R310	ERDS2TJ472T	4.7K 1/4W
R311	ERDS2TJ4R7T	4.7 1/4W
R312	ERDS2TJ562T	5.6K 1/4W
R313	ERDS2TJ472T	4.7K 1/4W
R314	ERDS2TJ682T	6.8K 1/4W
R315	ERDS2TJ472T	4.7K 1/4W
R316	ERDS2TJ222T	2.2K 1/4W
R317	ERDS2TJ272T	2.7K 1/4W
R318	ERDS2TJ153T	15K 1/4W
R319	ERDS2TJ473T	47K 1/4W
R320	ERDS2TJ103T	10K 1/4W
R321	ERDS2TJ103T	10K 1/4W
R322	ERDS2TJ222T	2.2K 1/4W
R324	ERDS2TJ102T	1K 1/4W
R325	ERDS2TJ103T	10K 1/4W
R327	ERDS2TJ182T	1.8K 1/4W
R328	ERDS2TJ101T	100 1/4W
R329	ERDS2TJ335T	3.3M 1/4W
R332	ERDS2TJ223T	22K 1/4W
R333	ERDS2TJ472T	4.7K 1/4W
R504	ERDS2TJ102T	1K 1/4W
R505	ERDS2TJ273T	27K 1/4W
R506	ERDS2TJ273T	27K 1/4W
R507	ERDS2TJ471T	470 1/4W
R508	ERDS2TJ563T	56K 1/4W
R509	ERDS2TJ102T	1K 1/4W
R510	ERDS2TJ474T	470K 1/4W
R511	ERDS2TJ153T	15K 1/4W
R512	ERDS2TJ683T	68K 1/4W
R513	ERDS2TJ331T	330 1/4W
R514	ERDS2TJ222T	2.2K 1/4W
R515	ERDS2TJ102T	1K 1/4W
R516	ERDS2TJ102T	1K 1/4W
R517	ERDS2TJ102T	1K 1/4W
R518	ERDS2TJ102T	1K 1/4W
R519	ERDS2TJ104T	100K 1/4W
R520	ERDS2TJ102T	1K 1/4W
R521	ERDS2TJ103T	10K 1/4W
R522	ERDS2TJ103T	10K 1/4W

Ref. No.	Part No.	Values & Remarks
R523	ERDS2TJ102T	1K 1/4W
R524	ERDS2TJ472T	4.7K 1/4W
R525	ERDS2TJ105T	1M 1/4W
R526	ERDS2TJ681T	680 1/4W
R527	ERDS2TJ106T	10M 1/4W
R528	ERDS2TJ334T	330K 1/4W
R529	ERDS2TJ124T	120K 1/4W
R531	ERDS2TJ102T	1K 1/4W
R532	ERDS2TJ102T	1K 1/4W
R536	ERDS2TJ222T	2.2K 1/4W
R537	ERDS2TJ222T	2.2K 1/4W
R538	ERDS2TJ333T	33K 1/4W
R539	ERDS2TJ104T	100K 1/4W
R540	ERDS2TJ104T	100K 1/4W
R541	ERDS2TJ104T	100K 1/4W
R542	ERDS2TJ393T	39K 1/4W
R544	ERDS2TJ103T	10K 1/4W
R545	ERDS2TJ562T	5.6K 1/4W
R546	ERDS2TJ1R5T	1.5 1/4W
R547	ERDS2TJ183T	18K 1/4W
R548	ERDS2TJ332T	3.3K 1/4W
R549	ERDS2TJ273T	27K 1/4W
R554	ERDS2TJ221T	220 1/4W
R555	ERDS2TJ560T	56 1/4W
R556	ERDS2TJ122T	1.2K 1/4W
R562	ERDS2TJ103T	10K 1/4W
R564	ERDS2TG472T	4.7K 1/4W
R565	ERDS2TG623T	62K 1/4W [M]
R567	ERDS2TJ394T	390K 1/4W
R573	ERDS2TJ472T	4.7K 1/4W
R574	ERDS2TJ333T	33K 1/4W
R577	ERDS2TJ123T	12K 1/4W
R578	ERDS2TJ272T	2.7K 1/4W
R580	ERDS2TJ103T	10K 1/4W
R581	ERDS2TJ103T	10K 1/4W
R582	ERDS2TJ103T	10K 1/4W
R583	ERDS2TJ103T	10K 1/4W
R586	ERDS2TJ222T	2.2K 1/4W
R587	ERDS2TJ103T	10K 1/4W
R588	ERDS2TJ103T	10K 1/4W
R589	ERDS2TJ103T	10K 1/4W
R591	ERDS2TJ821T	820 1/4W
R592	ERDS2TJ2R7T	2.7 1/4W
R701	ERDS2TJ273T	27K 1/4W
R702	ERDS2TJ273T	27K 1/4W
R703	ERDS2TJ222T	2.2K 1/4W
R704	ERDS2TJ473T	47K 1/4W
R705	ERDS2TJ473T	47K 1/4W
R706	ERDS2TJ473T	47K 1/4W
R708	ERDS2TJ221T	220 1/4W
R710	ERDS2TJ563T	56K 1/4W
R711	ERDS2TJ273T	27K 1/4W
R712	ERDS2TJ124T	120K 1/4W
R713	ERDS2TJ154T	150K 1/4W
R714	ERDS2TJ155T	1.5M 1/4W
R715	ERDS2TJ224T	220K 1/4W
R716	ERDS2TJ394T	390K 1/4W
R717	ERDS2TJ124T	120K 1/4W
R718	ERDS2TJ393T	39K 1/4W
R719	ERDS2TJ823T	82K 1/4W
R720	ERDS2TJ823T	82K 1/4W
R721	ERDS2TJ153T	15K 1/4W
R722	ERDS2TJ822T	8.2K 1/4W
R801	ERDS2TJ152T	1.5K 1/4W
R802	ERDS2TJ222T	2.2K 1/4W
R803	ERDS2TJ272T	2.7K 1/4W
R804	ERDS2TJ392T	3.9K 1/4W
R805	ERDS2TJ562T	5.6K 1/4W
R806	ERDS2TJ822T	8.2K 1/4W
R808	ERDS2TJ153T	15K 1/4W
R809	ERDS2TJ822T	8.2K 1/4W
R810	ERDS2TJ562T	5.6K 1/4W
R811	ERDS2TJ392T	3.9K 1/4W
R812	ERDS2TJ272T	2.7K 1/4W
R813	ERDS2TJ222T	2.2K 1/4W
R814	ERDS2TJ152T	1.5K 1/4W
R815	ERDS2TJ152T	1.5K 1/4W
R816	ERDS2TJ222T	2.2K 1/4W
R817	ERDS2TJ272T	2.7K 1/4W
R822	ERDS2TJ271T	270 1/4W
R823	ERDS2TJ332T	3.3K 1/4W
R824	ERDS2TJ103T	10K 1/4W
R833	ERDS2TJ153T	15K 1/4W
R834	ERDS2TJ153T	15K 1/4W
R835	ERDS2TJ153T	15K 1/4W
R901	ERDS2TJ471T	470 1/4W
	CAPACITORS	
C1	ECBT1H4R7KC5	4.7P 50V
C2	ECBT1H102KB5	1000P 50V
C3	ECBT1C332MR5	3300P 16V
C4	ECEA1HN010SB	1 50V
C5	ECBT1C103MS5	0.01 16V
C6	ECBT1H102KB5	1000P 50V
C8	ECBT1H102KB5	1000P 50V
C9	ECEA1AU101B	100 10V
C10	ECBT1H6R8KC5	6.8P 50V
C12	ECBT1H102KB5	1000P 50V
C13	ECBT1H102KB5	1000P 50V
C14	ECBT1H180JC5	18P 50V
C15	ECBT1H4R7KC5	4.7P 50V
C16	ECBT1H6R8KC5	6.8P 50V
C17	ECBT1H2R2KC5	2.2P 50V
C18	ECFR1C473MR	0.047 16V
C19	ECBT1H680J5	68P 50V
C20	ECBT1H1R5MC5	1.5P 50V
C21	ECBT1H102KB5	1000P 50V
C22	ECBT1H102KB5	1000P 50V
C23	ECBT1H331KB5	330P 50V
C24	ECBT1C103MS5	0.01 16V
C25	ECBT1H102KB5	1000P 50V
C26	ECBT1H270J5	27P 50V
C27	ECBT1H300J5	30P 50V
C28	ECEA1AU101B	100 10V
C29	ECBT1H102KB5	1000P 50V
C31	ECBT1H471KB5	470P 50V
C32	ECBT1H180JC5	18P 50V
C35	ECBT1H101KB5	100P 50V
C36	ECBT1H102KB5	1000P 50V
C38	ECEA0JU101B	100 6.3V
C39	ECBT1H101KB5	100P 50V
C40	ECFR1C223MR	0.022 16V
C41	ECBT1H102KB5	1000P 50V
C42	ECEA1HKA010B	1 50V
C43	ECEA0JU101B	100 6.3V
C44	ECFR1C473MR	0.047 16V
C45	ECFR1C103MR	0.01 16V
C46	ECEA1CKA100B	10 16V
C47	ECBT1C332MR5	3300P 16V
C48	ECBT1H681KB5	680P 50V
C49	ECEA1HKA010B	1 50V
C50	ECFR1C223MR	0.022 16V
C51	ECFR1C223MR	0.022 16V
C52	ECEA1HKA2R2B	2.2 50V
C53	ECEA1HKA010B	1 50V
C54	ECEA1HKA010B	1 50V
C56	ECFR1C223MR	0.022 16V
C57	ECBT1H102KB5	1000P 50V
C58	ECBT1H331KB5	330P 50V
C59	ECBT1H471KB5	470P 50V
C61	ECBT1C103MS5	0.01 16V
C63	ECBT1H102KB5	1000P 50V
C67	ECBT1H102KB5	1000P 50V
C68	ECBT1H6R8KC5	6.8P 50V
C70	ECBT1H331KB5	330P 50V
C79	ECBT1C103MS5	0.01 16V
C91	ECBT1H102KB5	1000P 50V
C92	ECBT1C103MS5	0.01 16V
C93	ECBT1H102KB5	1000P 50V
C101	ECBT1H101KB5	100P 50V
C102	ECBT1H102KB5	1000P 50V
C103	ECEA1EKA330B	33 25V
C104	ECBT1H331KB5	330P 50V
C105	ECFR1C183KR	0.018 16V
C106	ECEA1EKA4R7B	4.7 25V
C107	ECEA1EKA4R7B	4.7 25V
C108	ECEA0JKA470B	47 6.3V
C109	ECBT1H221KB5	220P 50V

Ref. No.	Part No.	Values & Remarks
C110	ECBT1H221KB5	220P 50V
C111	ECEA1EKA4R7B	4.7 25V
C112	ECBT1C152KR5	1500P 16V
C113	ECBT1H102KB5	1000P 50V
C114	ECBT1H102KB5	1000P 50V
C115	ECBT1H101KB5	100P 50V
C131	ECEA1HKAR47B	0.47 50V
C132	ECBT1C272MR5	2700P 16V
C133	ECEA1HKAR68B	0.68 50V
C134	ECEA1CKA100B	10 16V
C135	ECEA1HKAR47B	0.47 50V
C136	ECFR1C333KR	0.033 16V
C137	ECBT1H102KB5	1000P 50V
C151	ECBT1H102KB5	1000P 50V
C152	ECEA1CKA101B	100 16V
C153	ECEA1AKA101B	100 10V
C154	ECEA1AU222B	2200 10V
C155	ECQV1H224JZ3	0.22 50V
C156	ECEA1HKAR33B	0.33 50V
C166	ECBT1H471KB5	470P 50V
C169	ECEA1HKA010B	1 50V
C201	ECBT1H101KB5	100P 50V
C202	ECBT1H102KB5	1000P 50V
C203	ECEA1EKA330B	33 25V
C204	ECBT1H331KB5	330P 50V
C205	ECFR1C183KR	0.018 16V
C206	ECEA1EKA4R7B	4.7 25V
C207	ECEA1EKA4R7B	4.7 25V
C208	ECEA0JKA470B	47 6.3V
C209	ECBT1H221KB5	220P 50V
C210	ECBT1H221KB5	220P 50V
C211	ECEA1EKA4R7B	4.7 25V
C212	ECBT1C152KR5	1500P 16V
C213	ECBT1H102KB5	1000P 50V
C214	ECBT1H102KB5	1000P 50V
C215	ECBT1H101KB5	100P 50V
C231	ECEA1HKAR47B	0.47 50V
C232	ECBT1C272MR5	2700P 16V
C233	ECEA1HKAR68B	0.68 50V
C234	ECEA1CKA100B	10 16V
C235	ECEA1HKAR47B	0.47 50V
C236	ECFR1C333KR	0.033 16V
C237	ECBT1H102KB5	1000P 50V
C251	ECBT1H102KB5	1000P 50V
C252	ECEA1CKA101B	100 16V
C253	ECEA1AKA101B	100 10V
C254	ECEA1AU222B	2200 10V
C255	ECQV1H224JZ3	0.22 50V
C256	ECEA1HKAR33B	0.33 50V
C266	ECBT1H471KB5	470P 50V
C269	ECEA1HKA010B	1 50V
C301	ECEA1HN010SB	1 50V
C303	ECBT1C103MS5	0.01 16V

Ref. No.	Part No.	Values & Remarks
C305	ECQP2A681JZT	680P 100V
C306	ECQP1562JZ	5600P 100V
C307	ECEA1HKA010B	1 50V
C308	ECEA1AU221B	220 10V
C309	ECQP1223JZ	0.022 100V
C310	ECBT1H102KB5	1000P 50V
C311	ECBT1H102KB5	1000P 50V
C312	ECBT1H102KB5	1000P 50V
C313	ECBT1H102KB5	1000P 50V
C314	ECBT1C103MS5	0.01 16V
C315	ECEA1EU101B	100 25V
C319	ECEA1AU221B	220 10V
C320	ECEA1CKA100B	10 16V
C321	ECEA0JKA220B	22 6.3V
C322	ECEA0JKA101B	100 6.3V
C501	ECBT1H102KB5	1000P 50V
C503	ECBT1H331KB5	330P 50V
C504	ECBT1H331KB5	330P 50V
C505	ECBT1H331KB5	330P 50V
C507	ECBT1H104ZF5	0.1 50V
C509	ECEA0JKA221B	220 6.3V
C511	ECEA0JKA221B	220 6.3V
C512	ECBT1H102KB5	1000P 50V
C513	ECBT1H102KB5	1000P 50V
C515	ECBT1H680J5	68P 50V
C516	ECBT1H470J5	47P 50V
C517	ECBT1H220JC5	22P 50V
C518	ECBT1H220JC5	22P 50V
C519	ECBT1H680J5	68P 50V
C520	ECBT1H680J5	68P 50V
C524	ECEA1EKA4R7B	4.7 25V
C525	ECBT1C103MS5	0.01 16V
C526	ECEA0JKA221B	220 6.3V
C527	ECBT1H471KB5	470P 50V
C529	ECEA1CU100B	10 16V
C530	ECEA1EU101B	100 25V
C531	ECEA0JU221B	220 6.3V
C532	ECEA1EU470B	47 25V
C533	ECEA1EU470B	47 25V
C534	ECEA1AU101B	100 10V
C536	ECBT1H102KB5	1000P 50V
C538	ECA1EM332BV	3300 25V [M]
C540	ECEA1AKA220B	22 10V
C543	ECBT1H102KB5	1000P 50V
C548	ECEA1EU221B	220 25V
C549	ECBT1H102KB5	1000P 50V
C550	ECBT1H330J5	33P 50V
C551	ECBT1H102KB5	1000P 50V
C552	ECBT1H331KB5	330P 50V
C553	ECBT1H331KB5	330P 50V
C557	ECBT1H102KB5	1000P 50V
C558	ECBT1H102KB5	1000P 50V
C562	ECBT1C103MS5	0.01 16V

Ref. No.	Part No.	Values & Remarks
C563	ECBT1H102KB5	1000P 50V
C565	ECBT1H102KB5	1000P 50V
C567	ECBT1H102KB5	1000P 50V
C569	ECEA1EKA4R7B	4.7 25V
C570	ECBT1H102KB5	1000P 50V
C571	ECEA1EKA4R7B	4.7 25V
C573	ECBT1H102KB5	1000P 50V
C574	ECBT1C103MS5	0.01 16V
C575	ECBT1C103MS5	0.01 16V
C576	ECBT1H331KB5	330P 50V
C580	ECBT1H331KB5	330P 50V
C581	ECBT1H102KB5	1000P 50V
C582	ECBT1H102KB5	1000P 50V
C583	ECBT1H102KB5	1000P 50V
C584	ECBT1H102KB5	1000P 50V
C585	ECBT1H102KB5	1000P 50V
C589	ECBT1H102KB5	1000P 50V
C590	ECBT1H331KB5	330P 50V
C592	ECEA0JKA221B	220 6.3V
C594	ECBT1C103MS5	0.01 16V
C595	ECBT1H102KB5	1000P 50V
C598	ECBT1H331KB5	330P 50V
C701	ECEA1AKA470B	47 10V
C702	ECEA1EKA4R7B	4.7 25V
C703	ECFR1C473MR	0.047 16V
C704	ECBT1H102KB5	1000P 50V
C709	ECEA1AKA101B	100 10V
C710	ECEA1AKA101B	100 10V
C711	ECBT1H102KB5	1000P 50V
C712	ECEA1HKA010B	1 50V
C713	ECEA1EKA4R7B	4.7 25V
C801	ECQP1103JZ	0.01 100V
C901	ECKR1H103ZF5	0.01 50V
C902	ECKR1H103ZF5	0.01 50V
C903	ECKR1H103ZF5	0.01 50V
C904	ECKR1H103ZF5	0.01 50V
	<SERVO P.C.B.>	
	RESISTORS	
R701	ERJ6GEYJ100V	10 1/10W
R702	ERJ6GEYJ471V	470 1/10W
R703	ERJ6GEYJ823V	82K 1/10W
R704	ERJ6GEYJ102V	1K 1/10W
R705	ERJ6GEYJ103V	10K 1/10W
R706	ERJ6GEYJ102V	1K 1/10W
R707	ERJ6GEYJ473V	47K 1/10W
R708	ERJ6GEYJ104V	100K 1/10W
R709	ERJ6GEYJ683V	68K 1/10W
R711	ERJ6GEYJ154V	150K 1/10W
R712	ERJ6GEYJ221V	220 1/10W
R717	ERJ6GEYJ102V	1K 1/10W

Ref. No.	Part No.	Values & Remarks	
R718	ERJ6GEYJ102V	1K	1/10W
R719	ERJ6GEYJ102V	1K	1/10W
R720	ERJ6GEYJ102V	1K	1/10W
R721	ERJ6GEYJ101V	100	1/10W
R722	ERJ6GEYJ563V	56K	1/10W
R723	ERJ6GEYJ182V	1.8K	1/10W
R724	ERJ6GEYJ333V	33K	1/10W
R725	ERJ6GEYJ472V	4.7K	1/10W
R726	ERJ6GEYJ473V	47K	1/10W
R727	ERJ6GEYJ103V	10K	1/10W
R728	ERJ6GEYJ392V	3.9K	1/10W
R730	ERJ6GEYJ331V	330	1/10W
R731	ERJ6GEYJ392V	3.9K	1/10W
R734	ERJ6GEYJ101V	100	1/10W
R735	ERJ6GEYJ101V	100	1/10W
R736	ERJ6GEYJ101V	100	1/10W
R738	ERJ6GEYJ223V	22K	1/10W
R739	ERJ6GEYJ681V	680	1/10W
R741	ERJ6GEYJ562V	5.6K	1/10W
R742	ERJ6GEYJ562V	5.6K	1/10W
R743	ERJ6GEYJ562V	5.6K	1/10W
R744	ERJ6GEYJ103V	10K	1/10W
R745	ERJ6GEYJ155V	1.5M	1/10W
R748	ERJ6GEYJ182V	1.8K	1/10W
R749	ERJ8GEYJ103V	10K	1/8W
	CHIP JUMPERS		
RJ701	ERJ8GEY0R00A	0	1/10W
RJ702	ERJ8GEY0R00A	0	1/10W
RJ703	ERJ8GEY0R00A	0	1/10W
RJ704	ERJ8GEY0R00A	0	1/10W

Ref. No.	Part No.	Values & Remarks	
RJ707	ERJ8GEY0R00A	0	1/10W
RJ708	ERJ8GEY0R00A	0	1/10W
RJ709	ERJ8GEY0R00A	0	1/10W
RJ714	ERJ8GEY0R00A	0	1/10W
RJ715	ERJ8GEY0R00A	0	1/10W
RJ716	ERJ8GEY0R00A	0	1/10W
RJ717	ERJ8GEY0R00A	0	1/10W
RJ721	ERJ6GEY0R00A	0	1/10W
RJ724	ERJ6GEY0R00A	0	1/10W
RJ725	ERJ6GEY0R00A	0	1/10W
RJ726	ERJ6GEY0R00A	0	1/10W
RJ799	ERJ6GEY0R00A	0	1/10W
	TEST JUMPERS		
TJ701	EYF8CU	TEST JUMPER	
TJ702	EYF8CU	TEST JUMPER	
	CAPACITORS		
C701	ECEA0JKA220I	22	6.3V
C702	ECEA1HKA010I	1	50V
C703	ECEA0JKA101I	100	6.3V
C704	ECUZ1E104MBN	0.1	25V
C705	ECEA1HKA010I	1	50V
C706	ECUV1H101JCN	100P	50V
C707	ECUV1E273KBN	0.027	25V
C708	ECUV1H472KBN	4700P	50V
C709	ECUV1C473KBN	0.047	16V
C710	ECUV1H152KBN	1500P	50V
C711	ECUZ1E104MBN	0.1	25V
C712	ECUZ1E104MBN	0.1	25V

Ref. No.	Part No.	Values & Remarks	
C713	ECUV1C104MBM	0.1	16V
C714	ECEA0JKA101I	100	6.3V
C715	ECEA0JKA470I	47	6.3V
C716	ECUV1H561KBN	560P	50V
C717	ECUZ1E104MBN	0.1	25V
C718	ECUV1C224KBM	0.22	16V
C721	ECUV1H270JCN	27P	50V
C722	ECUV1H270JCN	27P	50V
C723	ECEA1AKA221I	220	10V
C724	ECUV1C104MBM	0.1	16V
C725	ECUV1H102KBN	1000P	50V
C726	ECUV1H102KBN	1000P	50V
C727	ECEA1HPK010I	1	50V
C728	ECEA1HPK010I	1	50V
C730	ECUZ1E104MBN	0.1	25V
C731	ECEA0JKA221I	220	6.3V
C732	ECEA0JKA221I	220	6.3V
C733	ECUZ1E104MBN	0.1	25V
C734	ECEA1AKA221I	220	10V
C735	ECUZ1E104MBN	0.1	25V
C736	ECUZ1E104MBN	0.1	25V
C737	ECUZ1E104MBN	0.1	25V
C738	ECUV1C154KBN	0.15	16V
C742	ECUV1E273KBN	0.027	25V
C743	ECUZ1E104MBN	0.1	25V
C744	ECUV1E822KBN	8200P	25V
C745	ECUV1C473MBN	0.047	16V
C746	ECUV1H050DCN	5P	50V
C747	ECUV1H222KBN	2200P	50V
C748	ECUV1H471KBM	470P	50V

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